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Finanční analýza vybrané společnosti

Financial Analysis of a Selected Company

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2. Description of the Financial Analysis Methodology
3. Description of Selected Company
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5. Conclusion

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The declaration

"I hereby declare that I have elaborated the entire thesis including annexes myself.

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Contents

1. Introduction

Financial analysis is the process of selecting, evaluating and interpreting financial data. Information for financial analysis comes from financial data (provided by balance sheet, income statement and cash flow statement), market data (including prices of securities, industry statistics), economic data (including GDP, producer price index, consumer price index). It's aimed to assess the company's present and future financial position. Financial analysis is usually performed by professionals who prepare reports that are provided to top managers as basis of decision-making. It's an important way to evaluate company's operations, expenses management, credit policy, etc.

Methods of financial analysis can be divided into four groups: common-size analysis (horizontal common-size analysis, vertical common-size analysis); financial ratio analysis (profitability ratios, liquidity ratios, solvency ratios, asset management ratios); pyramidal decomposition and influence quantification; credit methods. In this bachelor thesis, common-size analysis and financial ratio analysis are used.

The aim of this bachelor thesis is to analyze Yili company during the period from 2011 to 2015.

The thesis is divided into 5 chapters. The first chapter is introduction of the thesis. In chapter 2, financial analysis methodologies including financial statements, common-size analysis and financial ratio analysis are introduced. Chapter 3 is description of Yili. The thesis introduces Yili from 4 aspects: overview of Yili, development of Yili, corporate culture of Yili and products of Yili. In chapter 4, methods of financial analysis are applied to Yili company to assess its performance. In chapter 5, we make conclusions and provide advice for Yili company.

2. Description of Financial Analysis Methodology

This chapter is the description of financial analysis methodology. Methods of financial analysis that are used in this thesis are common-size analysis and financial ratio analysis. Through financial analysis, we can assess company's performance and help managers make better decisions to improve company's performance at next year.

Common-size analysis is analysis of data provided by financial statements and of changes over time. Its aim is to find the trends and major differences during selected period. Financial ratio analysis is analysis that compares financial data in the form of financial ratios and assesses the financial position of company.

Description in this chapter is based on the book: Dluhošová et al. (2014), Richtarová et al. (2013) and Peterson et al. (2012).

2.1 Financial Statements

There are three basic types of financial statements. They are balance sheet, income statement (profit and loss statement) and statement of cash flows.

2.1.1 Balance Sheet

The balance sheet (also referred to as statement of financial position) presents the financial condition of a company at a special day, usually at the end of a financial year. The balance sheet has two sides: on the left, it's assets; on the right, it has two parts: equity and liabilities. The main principle of balance sheet is an accounting equation:

$$\text{total assets} = \text{total liabilities} + \text{total equity} . \quad (2.1)$$

Assets are what a company owns. Assets have four characteristics:

Assets are expected to bring economic benefits to enterprises. If a project is not expected to bring benefits to the enterprise, it can't be recognized as an enterprise's asset.

Assets are sources that are owned or controlled by the enterprise. It means that there are two possibilities. One is that the enterprise has the ownership of the assets.

Another is that the assets are not owned by the enterprise, that is, the enterprise controls the assets and can derive economic benefits from these assets.

Assets were formed by transaction and events in the past. Only past transactions and events could form assets. Transactions and events that are expected to be happened in the future can't form assets.

Assets must be able to measure in currency. Only when assets are expressed by certain amount of currency, they can be recorded into financial statements and be used to measure the performance of the company.

According to liquidity (ability of assets to turnover and convert into cash), assets can be divided into two groups: non-current assets and current assets. Non-current assets (also referred to as fixed assets or long-term assets) include assets used by a company over a period longer than one year. Non-current assets can be divided into: tangible assets (machine, land, building, etc); intangible assets (patents, goodwill, trademark, etc); financial investments (shares, bonds owned by the company). Current assets are short-term assets which can be divided into: accounts receivable (other companies or individuals owe the company money); inventories (raw materials, commodity stocks, etc); cash and cash equivalents. Main difference between non-current assets and current assets is liquidity. Current assets are in form of cash or can be converted into cash quickly.

Equity and liabilities are sources of company's assets. Equity consists of investment of shareholders (capital belonging to the owners or shareholders of the company) and retained earnings. Equity can be divided into: common and preferred shares, share premium and retained earnings.

Liability (debt) is the source of capital come from creditors. In other words, liabilities represent money that company has borrowed and must be repaid at predetermined time. According to the borrowing period, liabilities can be divided into two groups: short-term liabilities and long-term liabilities. Short-term liabilities (also referred to current liabilities) are borrowed money that must be repaid within one year, such as accounts payable, accrued expenses, short-term notes, etc. Long-term liabilities include money that has been borrowed for longer than one year, such as

long-term bank loan and issued bonds.

Table 2.1 Example of balance sheet

ASSETS		EQUITY and LIABILITIES	
Long-term assets		Equity	
Long-term tangible assets	4000	Common shares	1400
Long-term intangible assets	590	Preferred shares	400
Long-term financial assets	295	Additional paid-in capital	550
Gross long-term assets	4885	Retained earnings	676
- accumulated depreciation	-1500		
Net long-term assets	3385	Total equity	3026
Current assets		Liabilities	
Inventories	230		
Receivables	380	Long-term liabilities	588
Short-term financial assets	150	Short-term liabilities	531
Total current assets	760	Total liabilities	1119
TOTAL ASSETS	4145	TOTAL EQUITY and LIABILITIES	4145

Source: Richtarová et al. (2013, p.32)

2.1.2 Income Statement

Income statement (referred to as profit and loss statement) presents the amount of profit of a company over a period of time, often a year. It shows the amount of revenues, costs and profit (net profit or loss). The basic equation of the income statement is:

$$\text{revenues-costs=net profit/loss} . \quad (2.2)$$

Revenues are amounts of income that the company earns from the ordinary activities (usually are selling of goods or services). Costs are amounts that are spent in the ordinary activities by the company. Net profit or loss equals to revenues minus costs.

Ordinary activities can be divided into two kinds: operating activity and financing activity. In operating activity, operating profit before interest and taxes equals to the difference between operating revenues (revenues from sale of goods and services) and operating costs (costs associated with generating operating revenues, such as raw material consumption, administrative costs). The formula is:

$$\text{EBIT} = \text{operating revenues} - \text{operating costs}, \tag{2.3}$$

where EBIT is earnings before interests and taxes.

In financing activities, net income equals to the difference between financial revenues (such as interests received, dividends received, coupons received) and financial costs (such as interests paid, coupons paid).

Profit before taxes equals to sum of operating income and financing income. Profit after tax equals to profit before taxes minus taxes. Related formulas are:

$$\text{EBT} = \text{operating income} + \text{financing income}, \tag{2.4}$$

$$\text{EAT} = \text{EBT} - \text{EBT} \cdot t, \tag{2.5}$$

where EBT is earnings before taxes and EAT is earnings after taxes.

Table 2.2 Example of income statement

＋ Total operating revenues
－ Total operating costs
＝ Operating income/loss
＋ Total financial revenues
－ Total financial costs
＝ Income before tax (EBT)
－ Income tax
＝ Net income/loss (EAT)

Source: Richtarová et al. (2013, p.34)

2.1.3 Cash Flow Statement

The statement of cash flows provides the company's cash inflows and outflows during a certain period. Cash inflows are money received during a certain period.

Cash outflows are money paid during a certain period. Related formulas are:

$$\text{net cash flow}=\text{cash inflows}-\text{cash outflows}, \tag{2.6}$$

$$\text{Cash at the end}=\text{cash at the beginning}+/-\text{net cash flow}. \tag{2.7}$$

Table 2.3 Example of cash flow statement

＋ Cash and cash equivalents at the beginning
＋ Total inflows
－ Total outflows
＝ Cash and cash equivalents at the end

Source: Richtarová et al. (2013, p.37)

A problem should be mentioned. Income statement doesn't equal to the statement of cash flow. Similarly, profit isn't the same as the cash flow. The main reason is that the income statement follows the principle of accrual basis. In this situation, revenues and costs are recorded when they happen, regardless of whether the money are received or not. As an example, company A bought goods on credit from company B last week, and now company A repays the money. In this example, two financial activities should be recorded. At the day when company A bought goods on credit, for company B, there was no record in the cash flow statement but it should be recorded as revenues in income statement. At the day when company A repays the money, for company B, there is no record in income statement but recorded as cash inflow in the statement of cash flow.

2.2 Common-size Analysis

Common-size analysis is analysis of data from financial statements and their changes over time. It can be divided into horizontal common-size analysis and vertical common-size analysis.

2.2.1 Vertical common-size analysis

Vertical common-size analysis (also referred to as structure analysis) is analysis that shows the proportion of selected components relative to selected benchmarks.

Examples of benchmarks are total assets, total equity and liability in the balance sheet or total revenues in the income statement. The formula of vertical common-size analysis is given as:

$$\text{proportion} = \frac{U_i}{\sum U_i}, \tag{2.8}$$

where U_i is the component value, and $\sum U_i$ is the benchmark value.

2.2.2 Horizontal common-size analysis

Horizontal common-size analysis (also referred to as trend analysis) is analysis of changes of financial statements data over a certain period. It reveals trends of financial data. Changes over time can be divided into absolute changes and relative changes. Formula of absolute change is:

$$\Delta U_t^{abs} = U_t - U_{t-1}. \tag{2.9}$$

Formula of relative change is:

$$\Delta U_t^{rel} = \frac{U_t - U_{t-1}}{U_{t-1}} = \frac{\Delta U_t}{U_{t-1}}, \tag{2.10}$$

where U_t is the value, t is the initial value, and t-1 is the value in the previous period.

2.3 Financial Ratio Analysis

The financial ratio can be used to assess the changes in earnings of an investment over the years, or to compare the different firms in a given industry at a given time.

Main ratios are followings:

- Liquidity reflects company's ability to pay its immediate and short-term debt.
- Solvency reflects the ability of enterprises to pay its long-term debt.
- Asset management (activity) reflects the efficiency of the usage of funds.
- Profitability reflects the ability of enterprises to obtain profits.

The above aspects are interrelated. For example, profitability can affect short-term and long-term benefits, and the efficiency of operational capacity can affect

profitability. Therefore, the financial analysis needs to apply these above ratios comprehensively.

2.3.1 Profitability Ratios

Profitability ratios measure the ability of firms to generate profits from investment in the form of return during a period. The higher the profitability ratios are, the better the competitive position of the company. Basic ratios are the followings:

Operating profit margin refers to the ratio of operating profit and operating income of an enterprise. It is an indicator that reflects the ability of company to obtain profits through operating, in consideration of operating costs. Formulas are given as:

$$\mathrm{OPM} = \frac{\mathrm{EBIT}}{\mathrm{revenues}}, \tag{2.11}$$

$$\mathrm{OPM} = \frac{\mathrm{operating\ profit}}{\mathrm{revenues}}, \tag{2.12}$$

where, EBIT is earnings before interests and taxes (also referred to as operating profit). The value of operating profit can be found in the income statement, and revenues include the main business income and other operating income.

The higher the operating profit margin, the more the operating profit provided by the enterprise's sales of goods, the stronger the profitability of the enterprise. On the contrary, the lower the ratio is, the weaker the profitability of the enterprise.

Net profit margin, also known as net profit margin on sales, refers to the ratio of net profit and revenues. It is an important indicator of the company's profitability. When calculate the net profit, costs, expenses and corporate income tax should be deducted. Formula is given as:

$$\mathrm{NPM} = \frac{\mathrm{EAT}}{\mathrm{revenues}}, \tag{2.13}$$

where EAT is earnings after taxes. It is the net effect for the company’s owners.

The net profit margin indicates the net profit generated by the net sales per hundred dollars. The higher the ratio is, the stronger the profitability of the enterprise. But it is

affected by the characteristics of the industry, and the analysis should be combined with special circumstances of different industries.

Return on assets, also known as the rate of return on assets, is the ratio of operating profit to assets. It is an important indicator that measures how much net profit is generated by per unit of assets. Its formula is given as:

$$\mathrm{ROA} = \frac{\mathrm{EBIT}}{\mathrm{assets}}, \tag{2.14}$$

$$\mathrm{ROA} = \frac{\mathrm{operating\ profit}}{\mathrm{assets}}. \tag{2.15}$$

Return on assets is one of the most widely used indicators that measure the profitability of companies. The higher the return on assets is, the better the assets are used. For the purpose of better management, the manager of the company is usually concerned about this indicator. The limitation of the return on assets is that it does not reflect the company's capital costs, while the return on capital makes up for the shortage.

Return on equity is the ratio of net profit to equity. It is an important indicator that is used to compare the profitability of different firms in the same industry. Formula is given as:

$$\mathrm{ROE} = \frac{\mathrm{EAT}}{\mathrm{equity}}. \tag{2.16}$$

This is an indicator that measures the company's profitability, showing the return on the equity capital. Equity capital is the capital provided by the shareholders, thus the return on equity capital is payment for shareholders after that the payment has been made to other capital suppliers. Because the net income does not truly reflect the firm's performance, the value of the ROE is not a reliable indicator that can determine the value or success of the firm. The company's high return on equity does not mean strong profitability. Some industries do not need too much investment, also usually have a higher ROE. ROE is better to be used to compare companies in the same industry.

2.3.2 Liquidity ratios

Liquidity ratio measures a company's ability to repay its short-term debts. Liquidity shows how quickly assets are converted into cash. Basic ratios are the followings:

Current ratio is the ratio of current assets to current liabilities, which is used to measure the ability of a company to convert current assets into cash before the maturity of short-term debt. Formula is given as：

$$\text{current ratio} = \frac{\text{current assets}}{\text{current liabilities}} \quad (2.17)$$

In this formula, current assets are assets that are in the form of cash or can be converted into cash quickly, mainly including accounts receivable, inventories, cash and cash equivalents (money funds, short-term investments, notes receivable). Current liabilities, also known as short-term liabilities, refer to debts that should be repaid in one year, including short-term notes, notes payable, accounts payable, deposits received, dividends payable, accrued tax, accrued expenses, and long-term liabilities that mature within one year.

The higher the liquidity ratio is, the quicker the assets are converted into cash. But when the ratio is too high, that is, the current assets occupies too much. As the result, it affects the efficiency of operating capital turnover and company's profitability. Generally, the value of current ratio should be 1.5-2.5 (Richtarová et al, 2013).

Quick ratio refers to the ratio of quick assets to current liabilities. It measures the ability of a firm to convert current assets into cash immediately to repay current liabilities. Its formula is given as:

$$\text{quick ratio} = \frac{\text{current assets} - \text{inventories}}{\text{current liabilities}} \quad (2.18)$$

Quick ratio is similar to current ratio. They are ratios that both measure the liquidity of the company. The core difference between quick ratio and current ratio is numerator of the formula. Current ratio is the ratio of current assets to current liabilities. But when calculating the quick ratio, the numerator of the formula should be "current assets minus inventories". That is, inventories should be deducted from

current assets, because inventories are slow and risky to be converted into cash. Some inventories may be unsalable and can't be converted into cash. As for the prepayments and prepaid expenses do not have the ability to convert into cash, theoretically they should be deducted. But in practice, because they account for a small proportion of current assets, they do not need to be deducted when calculating quick assets.

According to traditional experience, the quick ratio maintaining at 1-1.5 is more normal (Richtarová et al, 2013), and it shows that 1 unit of current liability can be repaid by 1-1.5 unit of current assets. When the quick ratio is too low, the company may be not able to repay its short-term debts. But when the quick ratio is too high, it means that quick assets occupy too much. But the above criteria are not absolute.

Cash ratio (also referred to as cash asset ratio) is the ratio of cash and cash equivalents to current liabilities. It measures the liquidity of the company's cash and cash equivalents. Its formula is:

$$\text{cash ratio} = \frac{\text{cash} + \text{marketable securities}}{\text{current liabilities}} \tag{2.19}$$

.

The cash ratio only measures the most liquid items in all assets, so it is the most conservative ratio of the three liquidity ratios. This formula reflects the ability of the company to repay the current debt only relying on the cash and cash equivalents. In addition, the cash ratio does not take into account the time when cash received and paid. Normal value of cash ratio is around 0.2 (Richtarová et al, 2013).

2.3.3 Solvency Ratios

Solvency ratios measure company's ability to repay its long-term debts. And sometimes they are also called financial leverage ratios which measure how the capital of company is financed. Basic ratios are the followings:

Debt-to-assets ratio is the ratio of total debt to total assets. It measures the proportion of a company's assets financed with debts. Its formula is given as:

$$\text{debt - to - assets ratio} = \frac{\text{total debt}}{\text{total assets}} \tag{2.20}$$

.

In the formula, the total liabilities include long-term liabilities and short-term liabilities, the total assets include current assets and non-current assets.

As to the value of debt-to-assets ratio, from different point of view, different expectations are generated. From the creditor's point of view, they are concerned about whether the principal and interests can be recovered. Therefore, they hope that the debt-to-assets ratio is as low as possible. Because the payment is guaranteed and borrowing money to the company isn't too risky.

From the investor's point of view, if the return on capital is higher than the interest rate of borrowed funds, the profit earned by investors will increase. Under the condition that the return on capital is higher than the interest rate of borrowed funds, the investors expect higher debt-to assets ratio.

Debt-to-equity ratio, also known as the ratio of debt to owner's equity, is the ratio of total debt to equity. It is an indicator that measures the company's financial leverage. Its formula is given as:

$$\text{debt - to - equity} = \frac{\text{total debt}}{\text{equity}} \quad (2.21)$$

The debt-to-equity ratio reflects the relationship between the funds provided by the creditor and the funds provided by the shareholders. The lower the ratio is, the better the long-term financial position of the firm.

Interest coverage, also known as interest coverage multiple, is the ratio of operating profit to interest paid. It is an indicator that measures whether the company's earnings before interests and taxes can pay the current interest. Its formula is:

$$\text{interest coverage} = \frac{\text{EBIT}}{\text{interest paid}} \quad (2.22)$$

Interest coverage is essentially a risk indicator, especially when the company is experiencing bad situation. It can explain whether the company has the ability to pay interest, and whether it has ability to finance funds to reverse the dilemma.

2.3.4 Activity Ratios

Activity ratios are ratios that measure the ability of company to convert assets into cash, and they can reflect the operation of the company and the efficiency of the business activities. The company's goal is to maximize revenue and minimize costs. For companies, converting inventories into accounts receivable and then converting accounts receivable into cash are included in periodic process. If the company makes this process faster, it will earn more economic profit. Basic ratios are:

Average collection period (ACP) is an indicator that measures how long the company needs to recover accounts receivable. It is an auxiliary indicator of the accounts receivable turnover. The shorter the turnover days are, the better the use of working capital. Following is its formula:

$$\mathrm{ACP} = \frac{\text{accounts receivable}}{\text{revenues}} \cdot 360 \quad . \tag{2.23}$$

Due to selling on credit existing in many industries, a large number of accounts receivable are formed. It's necessary for company's continuous operation to convert these receivables into real money quickly. If company receive payments later, that is, actual days of recovering accounts receivable will be longer, the company has to borrow money from creditors to continue operation. It will cause raising costs and passive operation. In the same industry, companies with shorter average collection period are more competitive.

Accounts receivable turnover is the ratio of revenues to accounts receivable. It indicates the average number of corporate accounts receivable converted into cash in a given period. Its formula is:

$$\mathrm{ART} = \frac{\text{revenues}}{\text{accounts receivable}} \quad . \tag{2.24}$$

Accounts receivable in a company is very important in current assets. If company's accounts receivable can be recovered on time, the company's capital efficiency will be greatly improved.

Inventory turnover is the ratio of costs of goods sold to average inventory.

Through calculation and analysis of inventory turnover, turnover speed of inventory of a company in a certain period can be determined. Inventory turnover can not only be used to measure the efficiency of inventory operations, but also to evaluate the business performance of enterprises. Here is the formula:

$$\mathrm{IT} = \frac{\text{costs of goods sold}}{\text{average inventory}}, \tag{2.25}$$

$$\text{average inventory} = \frac{\text{beginning inventory} + \text{ending inventory}}{2}. \tag{2.26}$$

The inventory turnover represented in terms of time is the days sales of inventory. It also has its own formula:

$$\text{days sales of inventory} = \frac{360}{\text{inventory turnover}}. \tag{2.27}$$

Inventory turnover reflects the level of inventory management and affects the short-term solvency of the company. In general, the faster the inventory turnover, the lower the occupied level of inventory, the higher the liquidity, the faster the inventories is converted into cash or receivables. Therefore, improving the inventory turnover can improve company's liquidity.

Total assets turnover is the ratio of revenues to total assets in a certain period. It measures how the company uses its assets to generate revenues. Following is its formula:

$$\mathrm{TAT} = \frac{\text{revenues}}{\text{total assets}}. \tag{2.28}$$

The greater the total assets turnover ratio is, the faster the assets turnover, the stronger the ability of selling. Companies can adopt the method of "quick returns and small margins" to accelerated assets turnover and increase the absolute amount of profits.

2.3.5 Other ratios

Ratios introduced in this part are P/E ratio, dividend yield and pay-out ratio.

Price to earnings ratio (referred to as PE or P / E Ratio), refers to the ratio of market capitalization to net profit in a certain period (usually 12 months). The formula is as follows:

$$\mathrm{P/E} = \frac{\text{market cap}}{\mathrm{EAT}}, \tag{2.29}$$

where market cap is market capitalization.

P / E ratio is one of the most commonly used indicators that assess whether the share price level is reasonable.

Dividend yield. It measures percentage return on shareholder's investment and it is also possible to evaluate whether the market value of the stock is undervalued. It's the ratio of dividends to market capitalization. Formula is given as follows:

$$\text{dividend yield} = \frac{\text{dividends}}{\text{market cap}}. \tag{2.30}$$

Pay-out ratio. It's the ratio of dividends to earnings after taxes (net income). Pay-out ratio measures what percentage the dividends distributed to shareholders accounted for in company's profits. Formula is given as follows:

$$\text{pay} - \text{out ratio} = \frac{\text{dividends}}{\mathrm{EAT}}. \tag{2.31}$$

2.4 DuPont Analysis

DuPont analysis uses the relationship between several major financial ratios to analyze company's financial condition comprehensively. It is the fundamental example of the pyramidal decomposition which enables us to analyze which factors have impact on the value of financial ratios. This method was firstly used by the DuPont USA, so it was named DuPont analysis. Return on equity (ROE) is the most comprehensive financial indicator, and it is the core of DuPont analysis. It helps managers find the determinants of return on equity easily. DuPont analysis is the

decomposition of ROE ratio by three component ratios:

$$\mathrm{ROE} = \frac{\mathrm{EAT}}{\mathrm{equity}} = \frac{\mathrm{EAT}}{\mathrm{revenues}} \cdot \frac{\mathrm{revenues}}{\mathrm{total\ assets}} \cdot \frac{\mathrm{total\ assets}}{\mathrm{equity}}, \tag{2.32}$$

where $\frac{\mathrm{EAT}}{\mathrm{revenues}}$ is net profit margin, $\frac{\mathrm{revenues}}{\mathrm{total\ assets}}$ is total assets turnover, $\frac{\mathrm{total\ assets}}{\mathrm{equity}}$ is financial leverage.

Net profit margin can be decomposed as follows:

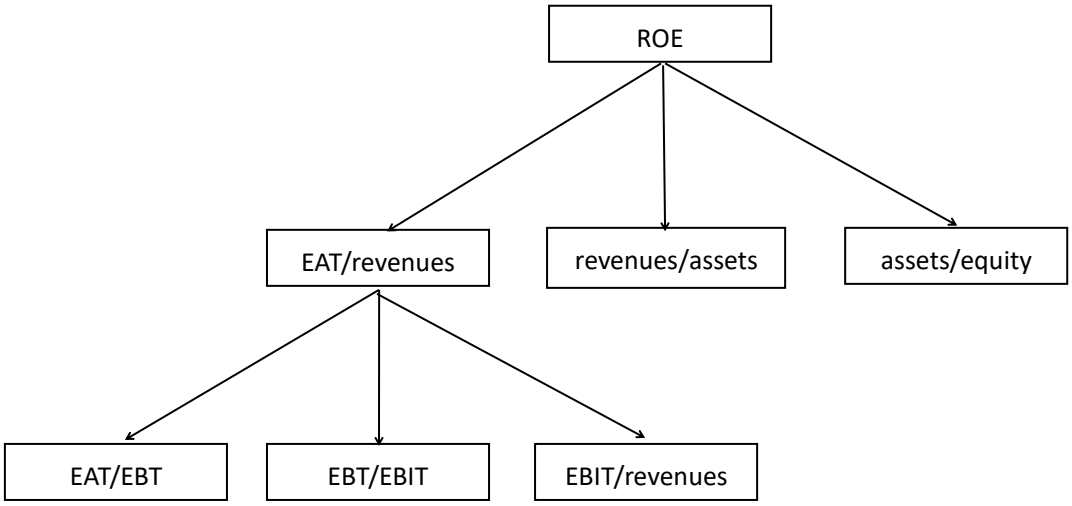
$$\frac{\mathrm{EAT}}{\mathrm{revenues}} = \frac{\mathrm{EAT}}{\mathrm{EBT}} \cdot \frac{\mathrm{EBT}}{\mathrm{EBIT}} \cdot \frac{\mathrm{EBIT}}{\mathrm{revenues}}, \tag{2.33}$$

where $\frac{\mathrm{EAT}}{\mathrm{EBT}}$ is tax burden, $\frac{\mathrm{EBT}}{\mathrm{EBIT}}$ is interest burden, $\frac{\mathrm{EBIT}}{\mathrm{revenues}}$ is operating profit margin.

Substituting from (2.33) to (2.32） ROE can be decomposed as follows,

$$\mathrm{ROE} = \frac{\mathrm{EAT}}{\mathrm{equity}} = \frac{\mathrm{EAT}}{\mathrm{EBT}} \cdot \frac{\mathrm{EBT}}{\mathrm{EBIT}} \cdot \frac{\mathrm{EBIT}}{\mathrm{revenues}} \cdot \frac{\mathrm{revenues}}{\mathrm{total\ assets}} \cdot \frac{\mathrm{total\ assets}}{\mathrm{equity}}. \tag{2.34}$$

Chart 2.1 Pyramidal decomposition of ROE



Source: own elaboration

2.4.1 Method of gradual changes

In the case of multiplicative relationship in pyramidal decomposition, there are four methods for quantification of the influence of component ratios: method of gradual changes, method of decomposition with surplus, logarithmic decomposition method,

functional decomposition method. In this part, only method of gradual changes is introduced. Method of gradual changes is a method which expresses absolute changes in component ratios. The advantage of method of gradual changes is that it can be used to analyze financial ratios regardless of positive or negative values in component ratio or basic ratio. The disadvantage is that the order of ratios in decomposition can influence the results. Decomposing of ROE by applying the method of gradual changes can be mathematically formulated as follows:

$$\Delta x_{a_i} = \prod_{j<\mathrm{i}} a_{j,1} \cdot \Delta a_i \cdot \prod_{j>i} a_{j,0} \quad , \tag{2.35}$$

In the case of three component ratios, the influences are given as follows:

$$\Delta x_{a_1} = \Delta a_1 \cdot a_{2,0} \cdot a_{3,0} \quad , \tag{2.36}$$

$$\Delta x_{a_2} = a_{1,1} \cdot \Delta a_2 \cdot a_{3,0} \quad , \tag{2.37}$$

$$\Delta x_{a_3} = a_{1,1} \cdot a_{2,1} \cdot \Delta a_3 \quad . \tag{2.38}$$

3. Description of Selected Company

This chapter is description of Yili company. It is introduced from four aspects: overview of Yili company (basic information of this company is introduced), development of Yili company (what did the company experience), corporate culture of Yili company (its belief, vision,core values, spirit), products of Yili company (liquid milk, milk powder, yogurt, ice cream).

3.1 Overview of Yili Company

Inner Mongolia Yili Industrial Group Co., Ltd (hereinafter referred to as Yili company) is china's largest dairy company.It is not only the best diary company in China, but also ranks first in the dairy industry in the Asian and top 8 in the world. In 2015, under the leadership of chairman of the board Pan Gang, Yili achieved two breakthroughs. On one hand, the Company's operating turnover reached 60.36 billion RMB and it is the first domestic diary company that exceeds 60 billion in Chinese history. On the other hand, company's net profit reached 4,654 million RMB.

The main reason why Yili becomes and keeps the first in China's diary industry and top 10 in the world is that Yili is always strict with itself with four aspects. They are product quality, international operation, innovation strategy and development principal.

The most important thing in food industry is safe. Yili also obeys this rule strictly. The basic principal and most important thing for Yili is the product quality. The main aim of this company is providing 100% safe and healthy dairy products. Specially, Yili company developed a strategy named " Quality leading 3210 strategy", which focuses on producing dairy products with the world's best quality. Because Yili company's high quality and high standard, Yili company was selected as the only dairy product sponsor of Beijing Olympic Games and Expo 2010 Shanghai. In order to avoid safety accidents, Yili keeps on three principles:

High Quality Raw Milk. Raw milk is the source of dairy products. The first step in keeping high quality of dairy products is guaranteeing high quality of raw milk. In 2015, Yili had more than 2400 self-constructive, under-constructive and co-operative pastures, which guarantee high quality of raw milk.

International Quality Control Standard. Yili achieved a strategic cooperation with SGS, LRQA and Intertek, and attracted whole society's attention. This cooperation helps Yili update its quality with the highest standard in the world.

Quality Control System. In November 2015, according to the new trend of global health food industry, Yili company developed a strategy named "Quality Leading 3210 strategy", which focuses on providing the highest quality around the world.

As to international operation, Yili also made many progress. The first step of Yili's international operation was opening a factory in New Zealand. And it also built strategic partnership with Italian dairy giant Sterilgarda Alimenti S.p.A. Then Yili set up European R&D Center which is the first overseas R&D center of Chinese dairy. In terms of science and technology, it also cooperated with universities, such as the University of Pennsylvania, Yale University, Cornell University, University of Toronto.

Innovation strategy is also very important to Yili. Yili never stops satisfying people's needs for health.It establishes the first dairy research institute in China. Yili also cooperates with professional institutions and works with a number of national and international nutrition authorities, and creates the first breast-milk database special for Chinese in the world.

Development principle of Yili is "the accumulation is more important than the speed, the prosperity of the industry is more important than the success of an individual enterprise, social value is more important than business wealth". In these years , Yili never avoid taking responsibility. In terms of charity, by 2015, Yili cumulatively spent 800 million RMB on public welfare programs.

As the AAAA-class tourist area, Yili corporate headquarters not only enhance the corporate image, but also strengthen international exchange.

Yili Prairie Milk Culture Museum is a theme museum that highlights the

development of milk culture of nomadic people in the northern part of China. It fills the blank in the milk culture of the “Milk City” –Hohhot, and it is the first one in China and the whole world.

Yili's global industrial chain is developed by Yili and Baidu. It restores the whole industrial chain online, integrates all platforms and visualizes every link in the industrial chain. It enables consumers to witness the transparent quality of Yili’s products without limits.

3.2 Development of Yili Company

Yili’s predecessor is a dairy cows raising cooperative which was set up in 1956 in Huimin District, Hohhot. In 1970, the dairy farm was renamed to “Hohhot Hongqi Dairy Farm”. In 1983, Hohhot Hongqi Dairy Farm was split into two parts: Hohhot Hui Min Dairy Farm and Hohhot Hui Min Dairy Product Processing Factory. In February 1993, Hohhot Hui Min Dairy Product Processing Factory was restructured. The factory united legal persons and its own workers for shareholding and raised funds to set up Yili Group. On June 14, 1993, it was finally renamed as “Inner Mongolia Yili Industrial Co., Ltd.”. In 1996, Yili went public and became China’s first dairy company that was listed on A-share market. In February 1997, Inner Mongolia Yili Industrial Group Co., Ltd. was formally established. In 2010, Yili’s Changqing Sour Milk was awarded the Golden Prize for Innovation of Functional Dairy Products by International Dairy Federation, and it was the first time and the highest honor for a Chinese diary company to get.

In the process of development, a man played a great role. He is Pan Gang who is chairman of the board of Yili company now. In 1999, Pan Gang set up the Yili liquid milk division, and served as the general manager. Before establishing the liquid milk division, the revenue of liquid milk business is only 60 million. Under the leadership of Pan Gang, the revenue of liquid milk business achieved 500 million in 2000, 1.2 billion in 2001, 2.4 billion in 2002 and 4.6 billion in 2003. The rapid development also led to the development of whole Chinese dairy industry and opened a new era of

“liquid milk”. And Yili is known to all households.

After solving the problem of region and quality guarantee period, Pan Gang found a new problem that 90% of the Chinese are varying degrees of lactose intolerant whose stomachs feel not good after drinking milk. He suggested that “In the eyes of staffs of Yili, there are two kinds of people in the world: one is people who drink milk and the other is people who don’t drink milk. Our mission is to turn the two kinds of people into one kind of people who drink milk and enjoy nutrition and health.” At that time, Yili invested a lot of resources to develop China’s first lactose hydrolyzed milk - ShuHua milk.

3.3 Corporate Culture of Yili Company

Corporate culture is the spiritual wealth and material form created in the process of business operating and management under certain conditions. Corporate culture is the soul of the enterprise, is an inexhaustible force for the development of business. Every corporate had better have its own corporate culture. Corporate culture of Yili company can be explained from four aspects: belief, vision, core values and spirit.

Belief of Yili is that represents the highest quality. Yili wants to provide 100% safe and healthy dairy food and requires its staffs to pay 100% devotion and attention to safety and health. It suggests that everyone is a creator of quality.

Its vision is becoming the most trusted health-food provider around the world. This can be expounded in detail as:

- Delivering the finest products and services to the world. Yili is not satisfied with providing good and healthy products. It wants to providing best and most healthy products.
- Advocating a healthy lifestyle for the benefit of everyone. Health is the most important thing in the life, and it’s great to have a healthy lifestyle.
- Leading the industry’s development on the world stage. Yili is the leader of dairy industry in China, and top 8 in the world. Leading the dairy industry in the world has strict requirements. It means that Yili has to pay more attention and spend

more resources on product developing and producing and technology development.

- Fulfilling social responsibilities, with diligence and devotion. Companies can't be exist alone in society. Society provides various resources to companies and companies need to respect social morality and create better environment. Yili focuses its attention on the "youth, community and environment".

Core values of Yili company are excellence, accountability, innovation and win-win.

- Excellence: Exceeding expectations continuously. Yili always requires its members to do their best and attract attention of customers by continuous surprise.
- Accountability: Whole heartedly embracing responsibility. Yili requires employees to dedicate themselves willingly.
- Innovation: Inventing and progressing each and every day. Never stop creating new things is the secret of Yili to be No.1 in the dairy market.
- Win-win: Progressing hand in hand for collective strength and superior results.

As a staff of Yili company, following spirit are also very important: be loyal, trustworthy, grateful, vigilant, ever-innovative, self-disciplined and self-reflective, be courageous in meeting challenges, diligent in overcoming them.

3.4 Products of Yili Company

Products of Yili company can be divided into four parts: liquid milk, milk powder, yogurt and ice cream.

Liquid milk is the most original product in dairy industry and is most widely accepted by people. Famous liquid milk products of Yili are basic items, QQ star, Yili school milk and ShuHua milk. Basic items are most classic products of Yili and it has the most customers. QQ star is designed for kids. Cartoon characters and main purpose in its advertisement really attract many kids. Yili school milk is a special product that designed for middle school and high school students. And most middle

and high schools order this product for students. ShuHua milk is China's first lactose hydrolyzed milk. People with lactose intolerance usually choose this product.

Milk powder is not only designed for babies but also for adults. For different ages of people, Yili develops different milk powder products. Specific products are Infant formula, TOFER, Adult formula.

Yogurt is a new special dairy product. It is a kind of milk product that made from milk. Its process is adding beneficial bacteria in the milk after pasteurization, and after fermentation, cooling and filling in cans. Yogurt not only retains all the advantages of milk, but also improves the process and avoids weakness, becoming more suitable for human. The main effects of yogurt are reducing blood press, reducing weight, preventing constipation and promoting digestion. Because its effects and good taste, yogurt are very popular now. Main yogurt products of Yili are Pure Day, Life Up, etc.

Ice cream is made from drinking water, milk, milk powder, butter (or vegetable oil), sugar, etc. Frozen ice cream is a great way to beat summer's heat. Many young people especially kids loves ice cream. Famous ice cream products are Chocliz, Ice plant, etc. Yili is insisting on innovation and tries its best to develop new great products to satisfy customers and lead the development of dairy industry.

4. Financial Analysis of Selected Company

Financial analysis is an important way to evaluate company's operations and management. It is used to analyze company's current and future financial position. In chapter 2, methodologies of financial analysis are introduced. In chapter 4, these methodologies are used to analyze Yili company from 2011-2015. All of the data used are from balance sheet, income statement and cash flow statement in annexes. All of the financial statements are from Yili's annual reports.

4.1 Common-size Analysis

Common-size analysis is analysis of data from financial statements and their changes over time. It can be divided into horizontal common-size analysis and vertical common-size analysis. In this part, common-size analysis is used to analyze Yili. Table 4.1 is simple balance sheet of Yili and Table 4.2 is simple income statement of income statement. They all show several basic and very important items. All of the data are from financial statements in annexes.

Table 4.1 Simple balance sheet of Yili (in million RMB)

	2011	2012	2013	2014	2015
Current assets	8,727	6,207	16,467	21,001	19,786
Non-current assets	11,202	13,608	16,410	18,493	19,845
Total assets	19,930	19,815	32,877	39,494	39,631
Current liabilities	12,866	11,478	15,517	18,757	18,202
Non-current liabilities	758	813	1,048	1,916	1,283
Total liabilities	13,624	12,290	16,565	20,673	19,485
Total equity	6,305	7,525	16,313	18,822	20,146
Total liabilities and equity	19,930	19,815	32,877	39,494	39,631

Source: own elaboration based on company's financial statements

Table 4.2 Simple income statement of Yili(in million RMB)

	2011	2012	2013	2014	2015
Revenue	37,451	41,991	47,779	54,436	60,360
Operating costs	35,959	40,402	45,251	50,154	55,652
Operating profits	1,746	1,616	2,659	4,390	4,894
Non-operating income	421	502	440	463	712
Non-operating expenses	31	31	38	67	83
EBT	2,136	2,087	3,060	4,786	5,524
Income tax expenses	304	351	-141	619	869
EAT	1,832	1,736	3,201	4,167	4,654
Earnings per share	1.13	1.07	1.65	1.35	0.76

Source: own elaboration based on company's financial statements

4.1.1 Vertical common-size analysis

Vertical common-size analysis is analysis that calculates the proportion of selected components relative to selected benchmarks. In this part, vertical analysis is used to analyze Yili's balance sheet in five years. It reflects structure of assets, equity and liabilities in five years. First is vertical common-size analysis of assets. According to the formula of vertical common-size analysis, we can calculate the proportion of each item to total assets. Complete vertical common-size analysis can be found in annex.

Table 4.3 Vertical common-size analysis of assets

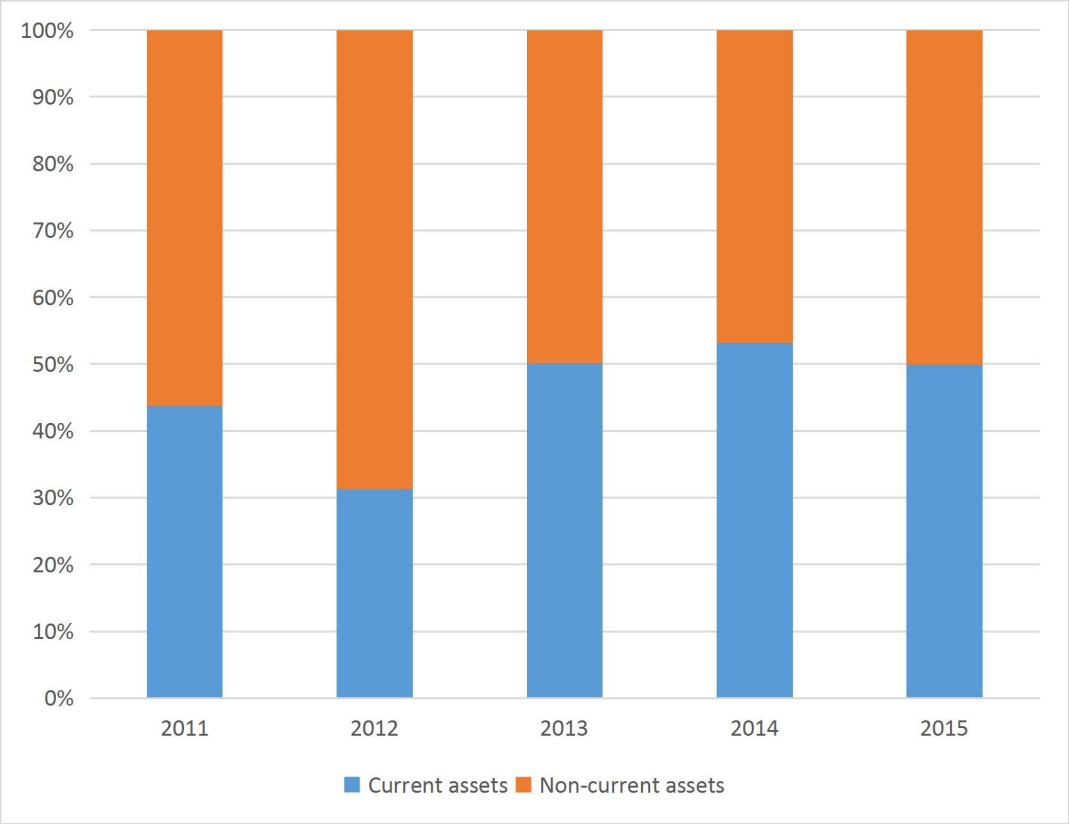
	2011	2012	2013	2014	2015
Cash and cash equivalents	19.67%	10.11%	24.86%	36.14%	33.01%
Inventories	16.61%	15.11%	11.20%	12.68%	11.77%
Others	7.51%	6.10%	14.02%	4.36%	5.15%
Total current assets	43.79%	31.33%	50.09%	53.17%	49.93%
Fixed assets	35.26%	44.92%	31.64%	33.22%	36.74%
Others	20.95%	23.76%	18.27%	13.60%	13.34%
Total non-current assets	56.21%	68.67%	49.91%	46.83%	50.07%
Total assets	100.00%	100.00%	100.00%	100.00%	100.00%

Source: own elaboration based on company's financial statements

Proportion reflects how much does the item account for in benchmarks, when we put all proportions together, we can find the structure of certain benchmark. Table 4.3

is the proportion of every item in assets in five years, and then we can make a chart which reflects structure of assets visually.

Chart 4.1 Structure of assets



Source: own elaboration based on company's financial statements

The basic data of vertical common-size analysis of assets is the amount of total assets. Thus the proportion of total assets to total assets is always 100%. As we mentioned before, total assets can be divided into current assets and non-current assets. In table 4.3, the relationship is also verified to be true. From 2011-2015, the percentage points which the proportion of total current assets to total assets increased (or decreased) were equal to the percentage points which the proportion of non-current assets to total assets decreased (or increased).

According to table 4.3, we can easily find that fixed assets, cash and cash equivalents, inventories accounted for the three largest proportions in total assets from 2011-2015. Fixed assets include buildings, machinery equipment, conveyance, electronic equipment, etc. Fixed assets usually account for a large percent in total assets, but fixed assets are also difficult to be converted into cash. It's better to have

lower percent of fixed assets, because it reflects fast flowing of capital and high operation capability. From 2011-2015, the proportions of fixed assets to total assets of Yili were higher than 30%, and the highest percentage was 44.92% in 2012. The main reason was that in every year there were new projects putting into operation.

When the proportion of cash and cash equivalents to total assets is too high, it means that cash occupies too much in capital but it also reflects that company can meet its short-term debts. According to table 4.3, the proportion of cash and cash equivalents was one of three largest proportions in total assets, and it fluctuated greatly. The proportion of cash and cash equivalents decreased by 9.56 percentage points in 2012, increased by 14.75 percentage points in 2013 and increased by 11.28 percentage points in 2014. Because in 2012, building long-term assets, repaying loans and distributing dividends spent a high amount of money and as a result, cash outflows were greater than net cash flows generated by operating activities. The percent of reduction of cash and cash equivalents was higher than the percent of reduction of total assets. As a result, the proportion of cash and cash equivalents decreased in 2012. In 2013 and 2014, the company's net cash inflow from operating activities and borrowings increased. Especially in 2013, Yili increased non-public offering of shares to gain capital. And the percent of growth is higher than the percent of growth of total assets. So, the proportion increased in 2013 and 2014.

Inventories include raw materials, commodity stocks, unfinished products, low priced and easily worn articles, wrappage, etc. The proportion of inventories to total assets was relatively stable during these five years. Inventories are related to quantity of production and sales. The proportion of inventories decreased in 2012. Because the amount of commodity stocks and wrappage decreased and the reduction of inventories was higher than the reduction of total assets, so that the proportion of inventories to total assets decreased in 2012. In 2013 and 2014, the company both increased its raw materials reserve. But in 2013, the growth of inventories was lower than the growth of total assets, therefore, the proportion of inventories decreased. In 2014, the growth of inventories was higher than the growth of total assets, and the proportion of inventories decreased.

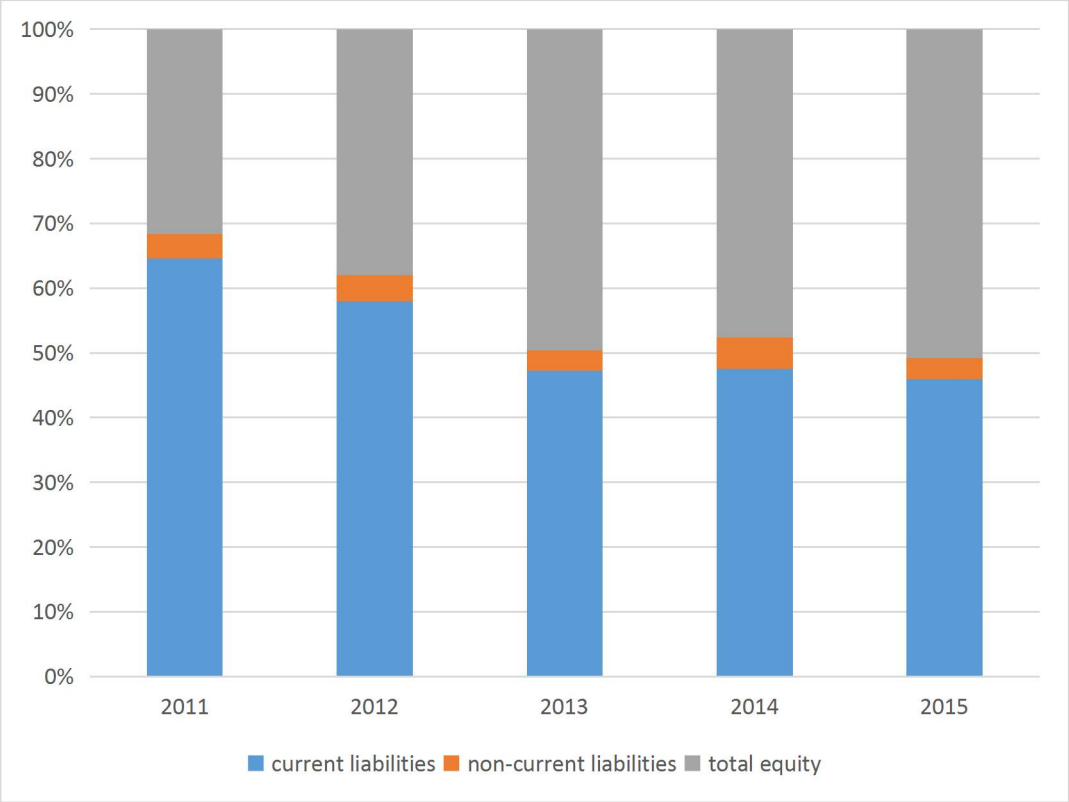
Above is the vertical common-size analysis of assets. Then we continue to calculate the proportion of each item in total equity and liabilities.

Table 4.4 Vertical common-size of equity and liabilities

	2011	2012	2013	2014	2015
Total current liabilities	64.56%	57.92%	47.20%	47.49%	45.93%
Total non-current liabilities	3.80%	4.10%	3.19%	4.85%	3.24%
Total liabilities	68.36%	62.02%	50.38%	52.34%	49.17%
Total equity	31.64%	37.98%	49.62%	47.66%	50.83%
Total equity and liabilities	100.00%	100.00%	100.00%	100.00%	100.00%

Source: own elaboration based on company's financial statements

Chart 4.2 Structure of total equity and liabilities



Source: own elaboration based on company's financial statements

Table 4.4 shows the proportion of several important items in total equity and liabilities, and it also can be shown as structure of total equity and liabilities in chart 4.2. The basic data of vertical common-size analysis of total equity and liabilities is the amount of total equity and liabilities. As we mentioned before, liabilities and equity reflect the sources for companies to finance capital.

In table 4.4, we can find that the two largest proportions in total equity and liabilities were the proportion of current liabilities and equity. It reflects that the main sources of Yili's capital were current liabilities, shareholders' investments and retained earnings. We can also find that total non-current liabilities accounted for a small percentage. It means that Yili relied more on current liabilities than other liabilities.

During 2011-2015, the general trend of the proportion of total liabilities was declining; on the contrary, the general trend of the proportion of total equity was rising. And the difference between the proportion of total liabilities and total equity was getting smaller. It was good to achieve balance in liabilities and equity.

4.1.2 Horizontal common-size analysis

In this part, horizontal common-size analysis is used to analyze the changes of data from income statement and cash flow statement over five years. Absolute changes and relative changes are calculated.

Table 4.5 Absolute changes of income statement (in million RMB)

	2011/2012	2012/2013	2013/2014	2014/2015
Total operating revenue	4,539	5,788	6,658	5,923
Total operating costs	4,442	4,850	4,903	5,497
Business taxes and surcharges	17	-16	-49	66
Selling expenses	487	768	1,528	3,184
Administrative expenses	839	-418	771	293
Financial expenses	98	-82	188	142
Others	2,780	4,700	2,434	1,899

Source: own elaboration based on company's financial statements

Table 4.5 shows the absolute changes of income statement and from 2011-2015. The main items that are analyzed are total operating revenue and items in total operating costs. We can find the changes between adjacent two years. Table 4.6 shows relative changes of income statement.

Table 4.6 Relative changes of income statement

	2011/2012	2012/2013	2013/2014	2014/2015
Total operating revenue	12.12%	13.78%	13.93%	10.88%
Total operating costs	12.35%	12.00%	10.84%	10.96%
Business taxes and surcharges	7.11%	-6.24%	-20.74%	35.41%
Selling expenses	6.68%	9.88%	17.89%	31.60%
Administrative expenses	42.57%	-14.87%	32.25%	9.26%
Financial expenses	-199.99%	-167.32%	-568.03%	91.86%
Others	10.39%	15.91%	7.11%	5.18%

Source: own elaboration based on company's financial statements

According to table 4.5 and table 4.6, total operating revenue kept increasing during these five years. Main business income accounted for the largest percentage in operating revenue, therefore, increasing in main business income led to increasing in total operating revenue. The common reasons for increase in main business income during 2011-2015 were increasing in sales volume and upgrading of product structure. Especially in the second half of the year of 2013, Yili adjusted the price of some products and increased the main business income of 2013 and 2014 directly. In 2015, due to changes in sales prices, revenues were reduced, but mainly due to decreasing in material prices and upgrading in product structure, costs were reduced more.

As to expenses, selling expenses kept increasing during five years. Because Yili was in a fiercely competitive market, investment in advertisement and shopping guide kept increasing. Administrative expenses and financial expenses both decreased in 2013, and increased in other years. As to administrative expenses, it increased a lot in 2012 because of following reasons: losses caused by scrap products; Yili raised worker's salaries and fee for social insurance was increased; increasing in productions led to increasing in cost of repairing equipment; new fixed assets were put into operation and led to increase in depreciation. As to financial expenses, in 2012, decrease in structure deposits in bank caused decrease in interest income. In 2013, due to the increase in cash and bank deposits, the interest income from bank deposits increased and the financial expenses decreased. In 2014, due to the increase in borrowings from bank, the interest expenses increased.

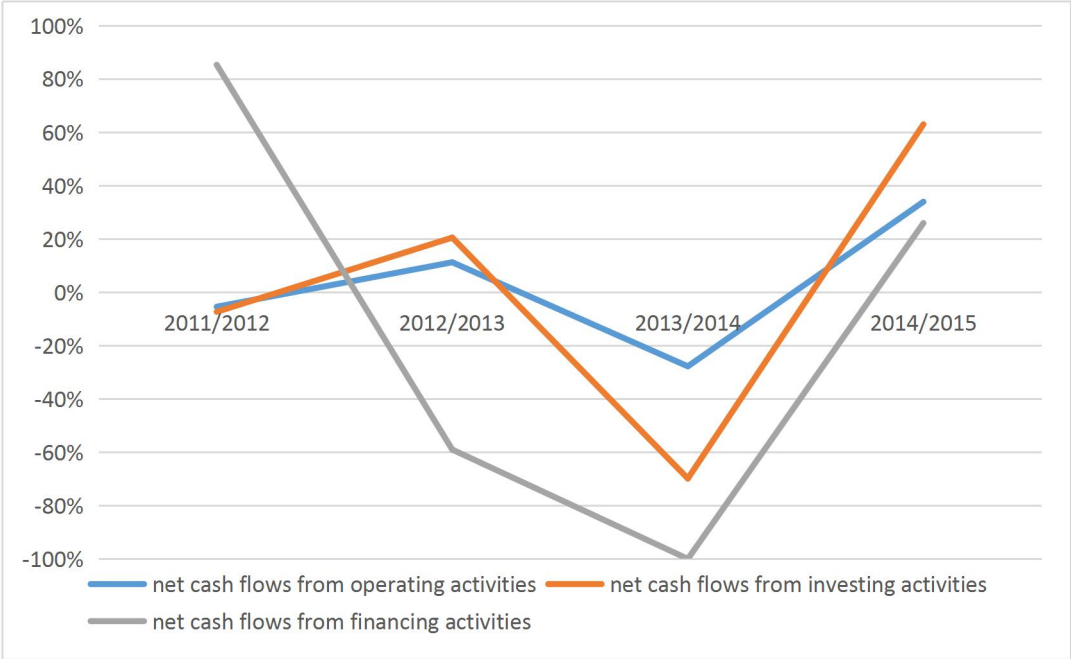
Then we continue to analyze cash flow statement during 2011-2015.

Table 4.7 Absolute changes of cash flow statement (in million RMB)

	2011/2012	2012/2013	2013/2014	2014/2015
Subtotal of cash inflows from operating activities	3,758	7,913	5,375	8,153
Subtotal of cash outflows from operating activities	5,020	4,846	8,414	1,053
Net cash flows from operating activities	-1,262	3,066	-3,038	7,100
Subtotal of cash inflows from investing activities	-458	6,271	-3,247	-2,744
Subtotal of cash outflows from investing activities	-876	9,474	-8,508	-256
Net cash flows from investing activities	418	-3,203	5,261	-2,488
Subtotal of cash inflows from financing activities	1,696	6,070	-2,176	1,260
Subtotal of cash outflows from financing activities	2,469	-2,075	2,182	10,421
Net cash flows from financing activities	-773	8,146	-4,358	-9,161

Source: own elaboration based on company's financial statements

Chart 4.3 Horizontal common-size of cash flow statement



Source: own elaboration based on company's financial statements

Table 4.8 Relative changes of cash flow statement

	2011/2012	2012/2013	2013/2014	2014/2015
Subtotal of cash inflows from operating activities	8.31%	16.15%	9.45%	13.09%
Subtotal of cash outflows from operating activities	12.08%	10.40%	16.36%	1.76%
Net cash flows from operating activities	-34.38%	127.31%	-55.50%	291.40%
Subtotal of cash inflows from investing activities	-91.10%	14015.90%	-51.41%	-89.42%
Subtotal of cash outflows from investing activities	-22.03%	305.40%	-67.66%	-6.29%
Net cash flows from investing activities	-12.04%	104.76%	-84.05%	249.17%
Subtotal of cash inflows from financing activities	42.72%	107.13%	-18.54%	13.18%
Subtotal of cash outflows from financing activities	60.19%	-31.58%	48.54%	156.05%
Net cash flows from financing activities	585.52%	-900.22%	-60.19%	-317.83%

Source: own elaboration based on company's financial statements

Table 4.7, table 4.8 and chart 4.3 are horizontal common-size analysis of cash flow statement.

We can easily find that during these five years, subtotal of cash inflows from operating activities and subtotal of cash outflows from operating activities both kept increasing. Because of the relationship between cash inflows, cash outflows and net cash flows, net cash flows from operating activities changed with the change of subtotal cash inflows and cash outflows from operating activities. In 2012 and 2014, the growth of subtotal of cash outflows from operating activities were higher than the growth of subtotal of cash inflows from operating activities, and the net cash flows from operating activities decreased. In 2013 and 2014, the growth of subtotal of cash inflows from operating activities were higher than the growth of subtotal of cash outflows from operating activities, and the net cash flows from operating activities increased. Similarly, net cash flows from investing activities and financing activities also followed above regularity.

Cash inflows from operating activities kept increasing because the main component cash received from sales of goods and rendering of services kept increasing during these years. Cash outflows from operating activities kept increasing because the main component cash paid for purchases of commodities and receipt of services kept increasing.

Subtotal of cash inflows from investing activities increased sharply in 2013 and decreased in 2014 and 2015. Because in 2013, Yili recovered the principal invested in financial products and it led to the increase in cash received relating to other investing activities. In 2014, the principal of financial products recovered by Yili was less than last year and in 2015, no principal of financial products was recovered. Subtotal of cash outflows from investing activities increased sharply in 2013. It because of that Yili purchased financial products and spent a large amount of money in 2013.

Subtotal of cash inflows from financing activities decreased in 2014 and increased in other years. Because in 2013, Yili received cash from absorbing investments but in 2014, no cash was received from absorbing investments. Subtotal of cash outflows from financing activities decreased in 2013 and increased in other years. In 2012, Yili repaid short-term borrowings and led to increase in the amount of cash paid for repayment of borrowings. And margin deposit for security decreased and resulted in the decrease in cash paid for distribution of dividends, profit or payment of interest expenses. Increasing in dividends paid by cash and cost of money caused increasing in cash paid relating to other financing activities. The growth of cash paid for repayment of borrowings and cash paid relating to other financing activities were higher than reduction of cash paid for distribution of dividends, profit or payment of interest expenses, thus, the subtotal of cash outflows from financing activities increased in 2012. Similarly, in 2013, the reduction of cash paid for repayment of borrowings was higher than the growth of cash paid for distribution of dividends, profit or payment of interest expenses and cash paid relating to other financing activities.

4.2 Financial Ratio Analysis

In this part, financial ratio analysis introduced in chapter 2 is used to analyze Yili company. Financial ratios are profitability ratios, liquidity ratios, solvency ratios, activity ratios and other ratios.

4.2.1 Profitability ratios

Profitability ratios are ratios which measure the ability of company to generate profit. Profitability ratios can be divided into operating profit margin (OPM), net profit margin (NPM), return on assets (ROA), return on equity (ROE). In this part, profitability ratios are calculated according to formulas in chapter 2.

Table 4.9 Profitability ratios (in million RMB)

	2011	2012	2013	2014	2015
Earnings before interest and taxes	2,240	2,187	3,142	4,969	5,693
Earnings after taxes	1,832	1,736	3,201	4,167	4,654
Revenue	37,451	41,991	47,779	54,436	60,360
Total assets	19,930	19,815	32,877	39,494	39,631
Total equity	6,305	7,525	16,313	18,822	20,146
Operating profit margin	5.98%	5.21%	6.58%	9.13%	9.43%
Net profit margin	4.89%	4.13%	6.70%	7.65%	7.71%
Return on assets	11.24%	11.04%	9.56%	12.58%	14.36%
Return on equity	29.06%	23.07%	19.62%	22.14%	23.10%

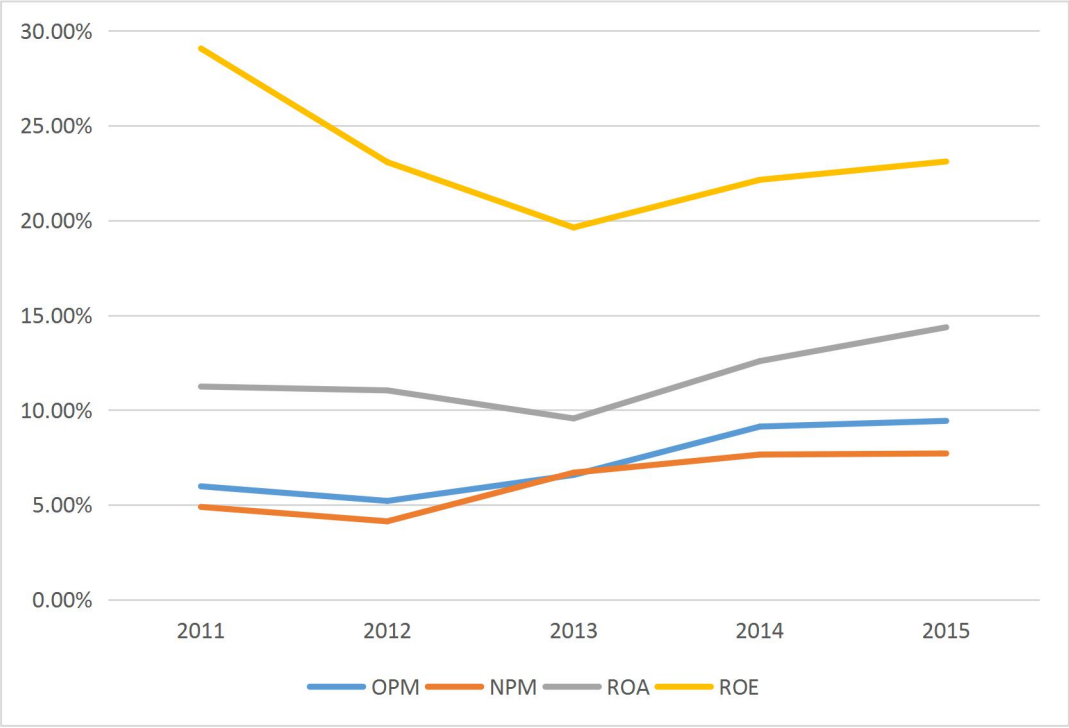
Source: own elaboration based on company's financial statements

Table 4.9 shows the values of original data and operating profit margin, net profit margin, return on assets, return on equity. According to table 4.9, the operating profit margin decreased by 0.77 percentage points in 2012 and increased in other years. Similarly, net profit margin decreased by 0.76 percentage points in 2012 and increased in other years. In 2012, increasing in total operating costs, especially increasing in administrative expenses resulted in decreasing in earnings before interest and taxes and earnings after taxes. As a result, operating profit margin and net profit margin decreased.

As to return on assets (ROA) and return on equity (ROE), the higher the ROA was, the more earnings before interest and taxes generated by assets. The higher the ROE was, the more earnings after taxes generated by equity. According to table 4.9, we can find that ROA and ROE decreased in 2012 and 2013, and increased in other years. In 2012, the growth of operating costs was higher than the growth of operating revenue, and EBIT and EAT decreased. As a result, return on assets and return on equity decreased. In 2013, Yili increased non-public offering of shares, put new projects into operation and increased raw materials reserve. And then, the growth of total assets was higher than the growth of EBIT. As a result, return on assets decreased in 2013. In 2013, increasing in non-public offering of shares also resulted in a increase in capital stock, so that ROE decreased.

According to table 4.9, we make chart 4.4 which shows the tendency of operating profit margin, net profit margin, return on assets and return on equity during 2011-2015.

Chart 4.4 Profitability ratios



Source: own elaboration based on company's financial statements

Operating profit margin and net profit margin are generally increasing. It means that profitability of Yili became better and better during these five years. After

comparing ROE and ROA in these five years, we can find that profits were generated more by equity than assets.

4.2.2 Liquidity ratios

Liquidity ratios are ratios that measure the company's ability to pay its short-term liabilities. Liquidity ratios can be divided into current ratio, quick ratio and cash ratio. In this part, above ratios are calculated according to formulas in chapter 2.

Table 4.10 Liquidity ratios (in million RMB)

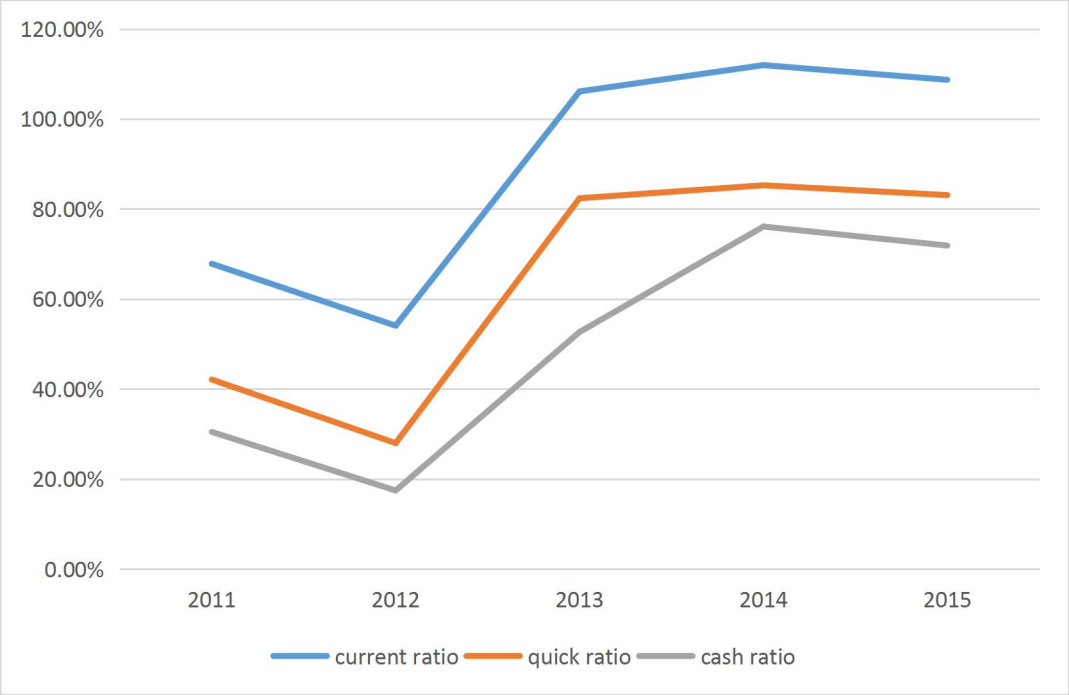
	2011	2012	2013	2014	2015
Current assets	8,727	6,207	16,467	21,001	19,786
Inventories	3,310	2,995	3,683	5,008	4,663
Current assets-inventories	5,418	3,213	12,784	15,993	15,123
Cash and cash equivalents	3,921	2,004	8,173	14,273	13,084
Current liabilities	12,866	11,478	15,517	18,757	18,202
Current ratio	67.83%	54.08%	106.12%	111.97%	108.70%
Quick ratio	42.11%	27.99%	82.39%	85.27%	83.08%
Cash ratio	30.48%	17.46%	52.67%	76.09%	71.88%

Source: own elaboration based on company's financial statements

Table 4.10 shows the values of original data and the values of current ratio,quick ratio, cash ratio. We can find that these ratios all decreased in 2012, increased in 2013 and then kept high levels, that is, the tendencies are similar. Because inventories, cash and cash equivalents are involved in current assets and occupy a large percent.

In 2012, building long-term assets, repaying loans and distributing dividends spent a large amount of money, and reduced the amount of cash and cash equivalents. As a result, it decreased the current assets, the difference between current assets and inventories. Then the liquidity ratios all decreased. In 2013, Yili increased non-public offering of shares to gain capital and increased its raw materials reserve. As a result, cash and cash equivalents, inventories both increased. Because of the increasing in current assets, current ratio, quick ratio and cash ratio all increased. Especially, from 2013, the current ratio began to be higher than 100%. It means that one unit of current liabilities could be repaid by more than one unit of current assets from 2013 to 2015.

Chart 4.5 Liquidity ratios



Source: own elaboration based on company's financial statements

Chart 4.5 shows the tendency of current ratio, quick ratio and cash ratio. According to table 4.10 and chart 4.5, we can find that Yili had high level of liquidity ratios. On the one hand, it means that Yili had high ability to meet its short-term obligations. On the other hand, it means that current assets occupied too much and it would affect the assets utilization. Yili can invest its cash to projects or increase dividends to shareholders.

4.2.3 Solvency ratios

Solvency ratios are ratios that measure the ability of company to pay its long-term debts. Solvency ratios can be divided into debt-to-assets ratio, debt-to-equity ratio and interest coverage. In this part, these ratios are calculated to measure the ability of Yili to meet its long-term obligations during 2011-2015.

Debt-to-assets ratio

According to formula (2.20), debt-to-assets ratio is the ratio of total liabilities to total assets. The value of total liabilities and total assets were from balance sheet. It measures the percentage of assets that financed by liabilities.

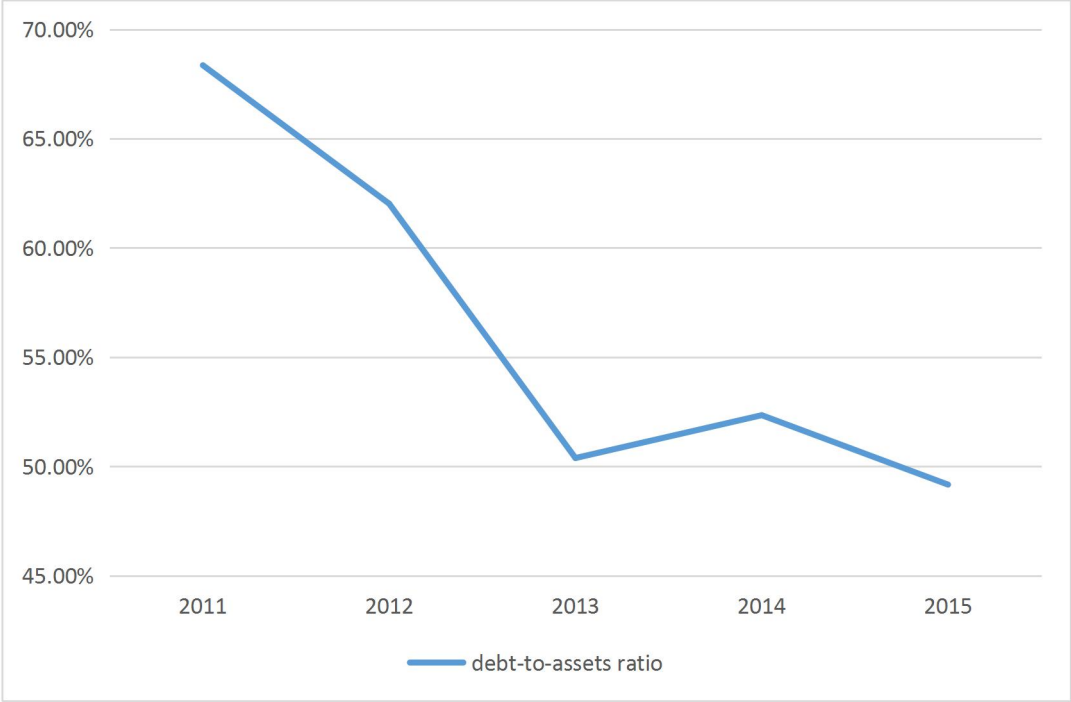
Table 4.11 Debt-to-assets ratio (in million RMB)

	2011	2012	2013	2014	2015
Total liabilities	13,624	12,290	16,565	20,673	19,485
Total assets	19,930	19,815	32,877	39,494	39,631
Debt-to-assets ratio	68.36%	62.02%	50.38%	52.34%	49.17%

Source: own elaboration based on company's financial statements

Table 4.11 shows the original data and the value of debt-to-assets ratio. We can find that debt-to-assets ratio decreased approximately in 2011-2015. It means that the percentage of Yili's assets that financed by debts decreased in these years. That is, Yili relied more and more on equity to finance capital. Chart 4.6 reflects the trend of debt-to- equity ratio.

Chart 4.6 Debt-to-assets ratio



Source: own elaboration based on company's financial statements

Debt-to-equity ratio

According to formula (2.21), debt-to-equity ratio is the ratio of total liabilities to total equity. The value of original data came from balance sheet. Debt-to-equity ratio is similar to debt-to-assets ratio. They both reflect the relationship between assets, liabilities and equity.

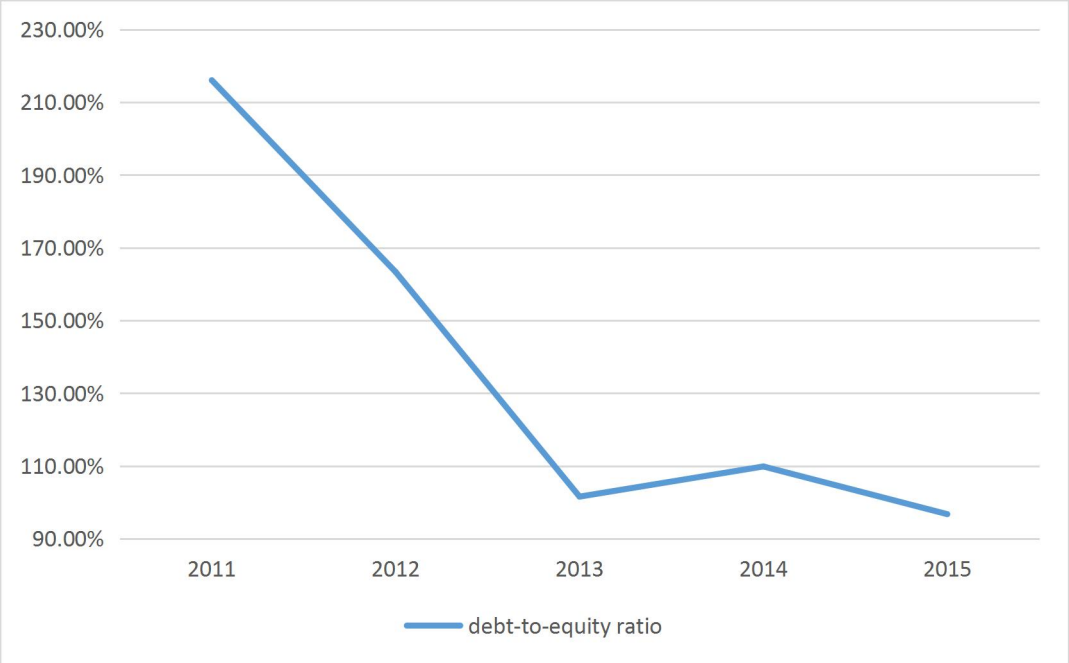
Table 4.12 Debt-to-equity ratio (in million RMB)

	2011	2012	2013	2014	2015
Total liabilities	13,624	12,290	16,565	20,673	19,485
Total equity	6,305	7,525	16,313	18,822	20,146
Debt-to-equity	216.07%	163.33%	101.54%	109.84%	96.72%

Source: own elaboration based on company's financial statements

Table 4.12 shows original data and the value of debt-to-equity ratio. Similarly, the debt-to-equity ratio decreased during 2011-2015. It means that Yili relied less on total liabilities. Before 2015, the debt-to-equity ratio were higher than 1. It means that before 2015, Yili' s capital financed by debt were more than capital financed by equity. We make chart 4.7 which reflects the trend of debt-to-equity ratio during 2011-2015.

Chart 4.7 Debt-to-equity ratio



Source: own elaboration based on company's financial statements

Interest coverage

According to formula (2.22), interest coverage is the ratio of earnings before interest and taxes to interest paid. Interest paid is the difference between earnings before interest and taxes (EBIT) and earnings before taxes (EBT). Interest paid is a part of financial expenses and can be found in annotation of income statement in

annual reports.

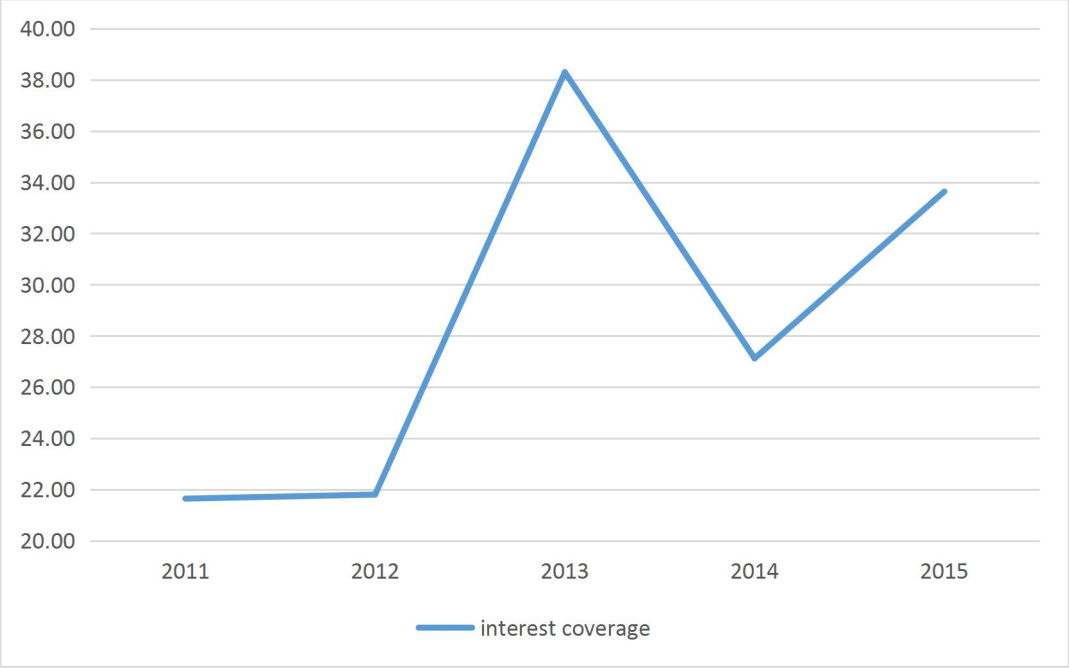
Table 4.13 Interest coverage (in million RMB)

	2011	2012	2013	2014	2015
EBIT	2,240	2,187	3,142	4,969	5,693
Interest paid	103	100	82	183	169
Interest coverage	21.65	21.80	38.29	27.12	33.64

Source: own elaboration based on company's financial statements

In table 4.13 and chart 4.8, interest coverage increased in 2013 and 2015, and decreased in 2014. In 2013, increasing in sales of goods and product prices led to increasing in EBIT, but interest paid decreased. Then, interest coverage increased. In 2014, the growth of interest paid was greater than the growth of EBIT, so the interest coverage decreased. Chart 4.8 reflects the tendency of interest coverage during 2011-2015.

Chart 4.8 Interest coverage



Source: own elaboration based on company's financial statements

After calculating of solvency ratios, we can find that the proportion of total liabilities to total assets was decreasing in these five years. And the proportion of total liabilities and the proportion of total assets are getting closed. From the view of solvency, Yili can borrow more money, that is , Yili can increase the proportion of

liabilities. Because according to interest coverage, we can find that Yili paid small amount of money on interest and it means that it can afford more interests.

4.2.4 Activity ratios

Activity ratios are ratios that measure the assets utilization. They are average collection period, accounts receivable turnover, inventory turnover and total assets turnover. In this chapter, these ratios are calculated to analyze Yili's assets utilization. Because of the same effect of average collection period and accounts receivable turnover, in this chapter, only average collection period is calculated.

Average collection period

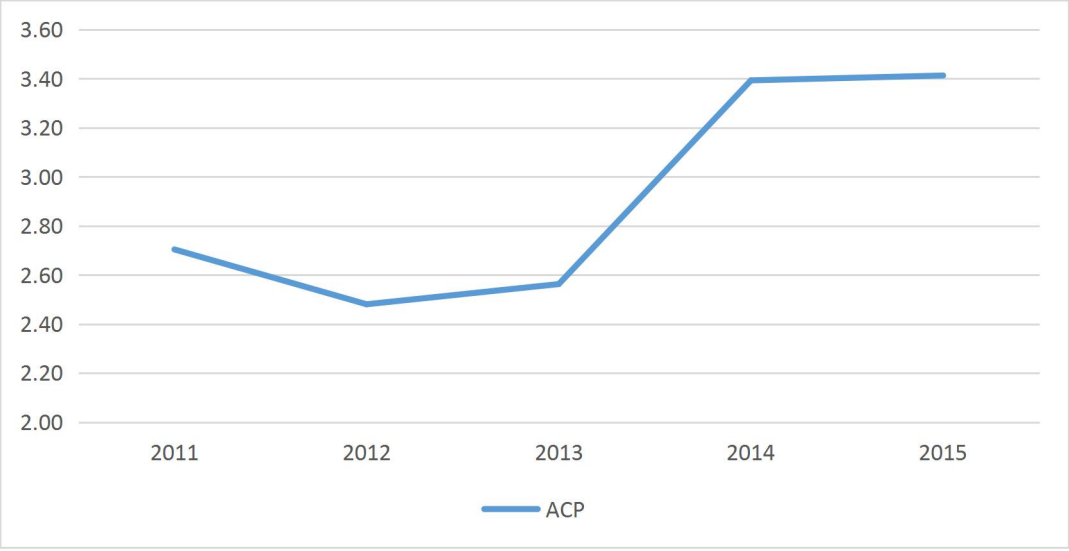
According to formula (2.23), the basic data used to calculate average collection period (ACP) are accounts receivable and revenue, and they can be found in balance sheet and income statement.

Table 4.14 Average collection period (in million RMB, unit of ACP: days)

	2011	2012	2013	2014	2015
Accounts receivable	281	289	340	513	572
Revenue	37,451	41,991	47,779	54,436	60,360
ACP	2.70	2.48	2.56	3.39	3.41

Source: own elaboration based on company's financial statements

Chart 4.9 Average collection period



Source: own elaboration based on company's financial statements

Table 4.14 shows the original data and the value of average collection period. Average collection period was stable in 2011-2013 and increased relative sharply in 2014. Because in 2014, increasing in sales of goods led to increasing in accounts receivable, and the time the company took to collect the receivables became longer. Because the range of variation of ACP was small, the average collection period kept a low level and it was good for Yili to use capital.

Inventory turnover

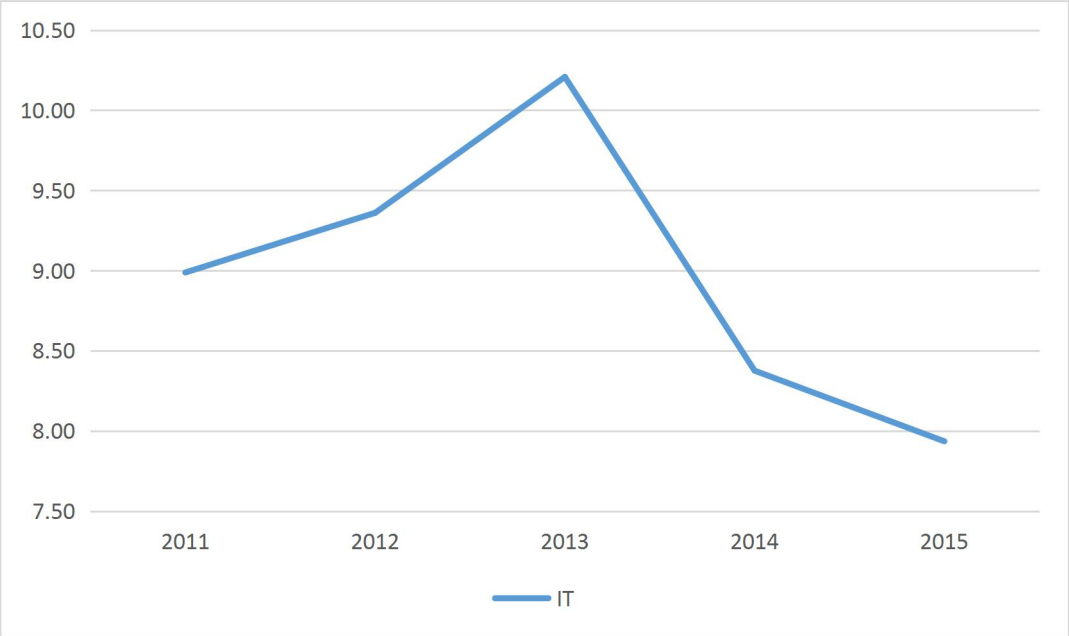
According to formula (2.25) and (2.26), the amount used to calculate inventory turnover (IT) is average inventory, so we need to calculate average inventory firstly.

Table 4.15 Inventory turnover (in million RMB)

	2011	2012	2013	2014	2015
Costs of goods sold	26,486	29,505	34,083	36,400	38,376
Beginning inventory	2,584	3,310	2,995	3,683	5,008
Ending inventory	3,310	2,995	3,683	5,008	4,663
Average inventory	2,947	3,152	3,339	4,346	4,836
IT	8.99	9.36	10.21	8.38	7.94

Source: own elaboration based on company's financial statements

Chart 4.10 Inventory turnover



Source: own elaboration based on company's financial statements

Table 4.15 shows the original data, the value of average inventory and inventory turnover. The tendency of IT is shown in chart 4.10, and the turning point is IT in 2013. It indicates that inventory turned over fastest in 2013 and inventories occupied least in these years.

Total assets turnover

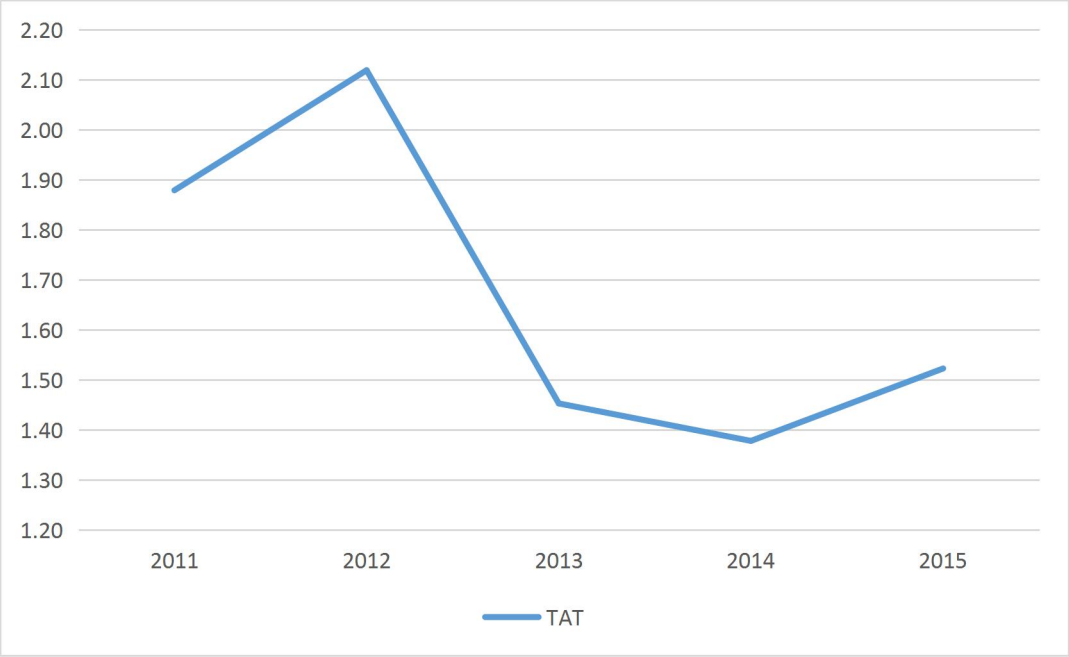
According to formula (2.28), total assets turnover (TAT) is calculated by revenues and total assets.

Table 4.16 Total assets turnover (in million RMB)

	2011	2012	2013	2014	2015
Revenue	37,451	41,991	47,779	54,436	60,360
Total assets	19,930	19,815	32,877	39,494	39,631
TAT	1.88	2.12	1.45	1.38	1.52

Source: own elaboration based on company's financial statements

Chart 4.11 Total assets turnover



Source: own elaboration based on company's financial statements

In table 4.16 and chart 4.11, we can find that total assets turnover during these five years were higher than 1 and reached highest point in 2012. It meant that in 2012, each unit invested in assets generated revenue of 2.12. The higher the assets turnover is, the better the assets utilization.

In this part, we can find that Yili had low level of average collection period, high level of inventory turnover and total assets turnover. It reflects that Yili had good assets utilization.

4.2.5 Other ratios

In this part, PE ratio, dividend yield and pay-out ratio are calculated to analyze Yili during 2011 and 2015. Earnings after taxes and dividends can be found in financial statements, and market capitalization can be found in a software named Flush.

Price to earnings ratio

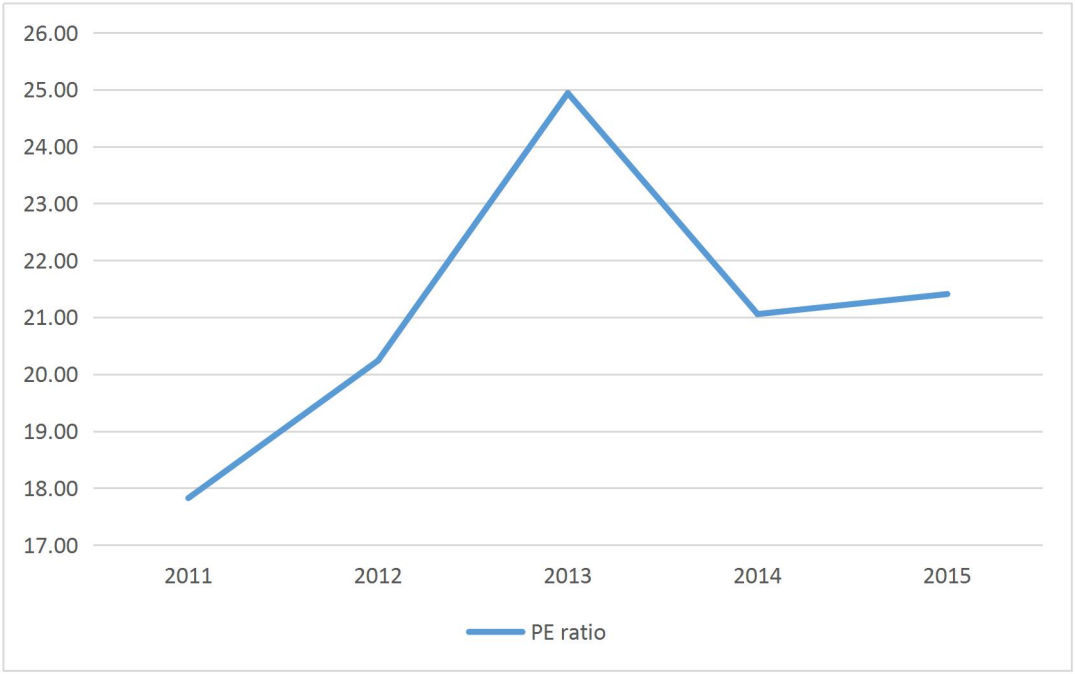
PE ratio is an indicator that assesses whether the share price level is reasonable.

Table 4.17 Price to earnings ratio (in million RMB)

	2011	2012	2013	2014	2015
Market capitalization	32,660	35,138	79,837	87,733	99,645
EAT	1,832	1,736	3,201	4,167	4,654
P/E	17.82	20.24	24.94	21.06	21.41

Source: own elaboration based on company's financial statements

Chart 4.12 Price to earnings ratio



Source: own elaboration based on company's financial statements

Table 4.17 and chart 4.12 reveal the amount and tendency of PE ratio. PE ratio in

2012 was lower than 20 and reached the highest amount in 2013. The higher the PE ratio, the more the market expected on the company. As a leader diary company, Yili is placed great expectations.

Dividend yield

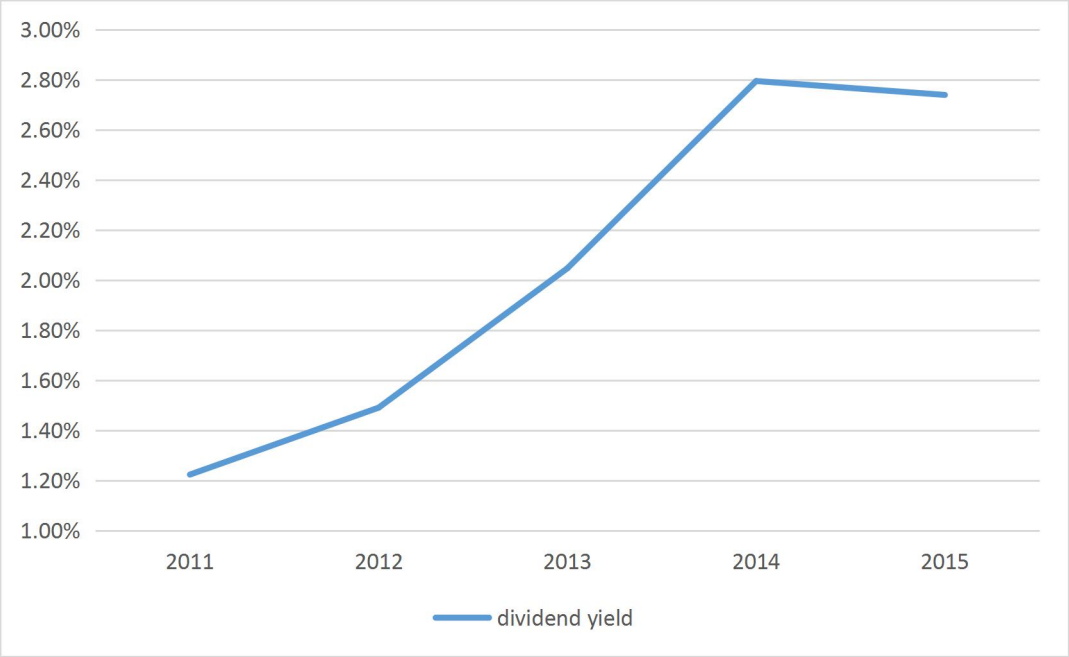
Dividend yield is the ratio of dividends to market capitalization. It is an important indicator which measures whether it is worth investing in a company.

Table 4.18 Dividend yield (in million RMB)

	2011	2012	2013	2014	2015
Dividends	400	524	1,634	2,451	2,729
Market capitalization	32,660	35,138	79,837	87,733	99,645
Dividend yield	1.22%	1.49%	2.05%	2.79%	2.74%

Source: own elaboration based on company's financial statements

Chart 4.13 Dividend yield



Source: own elaboration based on company's financial statements

Table 4.18 and chart 4.13 shows the amount and trend of dividend yield during 2011-2015. Dividend yield measures percentage return on shareholder's investment. From above data, we can find that dividend yield kept increasing from 2011 to 2014, and decreased lightly in 2015. Positive growth trend of Yili made it more competitive in stock market and helped it attract more investors.

Pay-out ratio

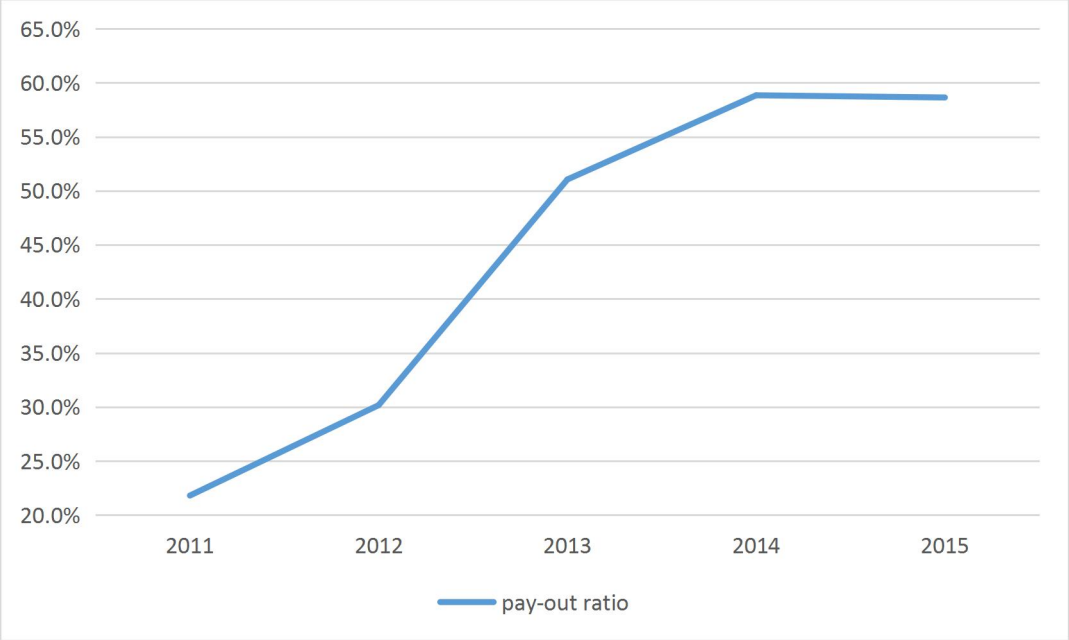
Pay-out ratio measures what percentage the dividends distributed to shareholders accounted for in company's profits.

Table 4.19 Pay-out ratio (in million RMB)

	2011	2012	2013	2014	2015
Dividends	400	524	1,634	2,451	2,729
EAT	1,832	1,736	3,201	4,167	4,654
Pay-out ratio	21.8%	30.2%	51.1%	58.8%	58.6%

Source: own elaboration based on company's financial statements

Chart 4.14 Pay-out ratio



Source: own elaboration based on company's financial statements

In table 4.19 and chart 4.14, we can see, pay-out ratio kept increasing in 2011-2015 and the highest amount was 58.8%. In the view of shareholders, it was a good signal. Yili paid more and more dividends to shareholders and also attracted more investors.

After analysis of other ratios, we can find that Yili had high level of price to earnings ratio, dividend ratio, pay-out ratio. It reflects that Yili was placed great expectations and also was competitive in stock market. It benefits Yili.

4.3 DuPont Analysis

DuPont analysis is the fundamental example of the pyramidal decomposition. It is the decomposition of return on equity (ROE) by three component ratios. In this part, DuPont analysis is used to analyze the financial condition of Yili during 2011-2015. Table 4.20 shows the values of component ratios and basic ratio. Component ratios are net profit margin, total assets turnover and financial leverage.

Table 4.20 Pyramidal decomposition of ROE

	2011	2012	2013	2014	2015
Net profit margin	4.89%	4.13%	6.70%	7.65%	7.71%
Total assets turnover	1.88	2.12	1.45	1.38	1.52
Financial leverage	3.16	2.63	2.02	2.10	1.97
Return on equity	29.06%	23.07%	19.62%	22.14%	23.10%
Absolute change	×	-0.0599	-0.0345	0.0251	0.0097

Source: own elaboration based on company's financial statements

According to table 4.20, we can find that absolute change of return on equity was negative in 2012 and 2013, which means that return on equity decreased in 2012 and 2013. Then we use method of gradual changes to analyze component ratios whose change causes change in the return on equity.

4.3.1 Method of gradual changes

As we mentioned in chapter 2, method of gradual changes is one of the methods for quantification of influence.

According to the data in table 4.20, we can calculate the gradual changes of component ratios in each period. Net profit margin is presented by a_1, total assets turnover is presented by a_2, financial leverage is presented by a_3. Table 4.21 shows the result of method of gradual changes.

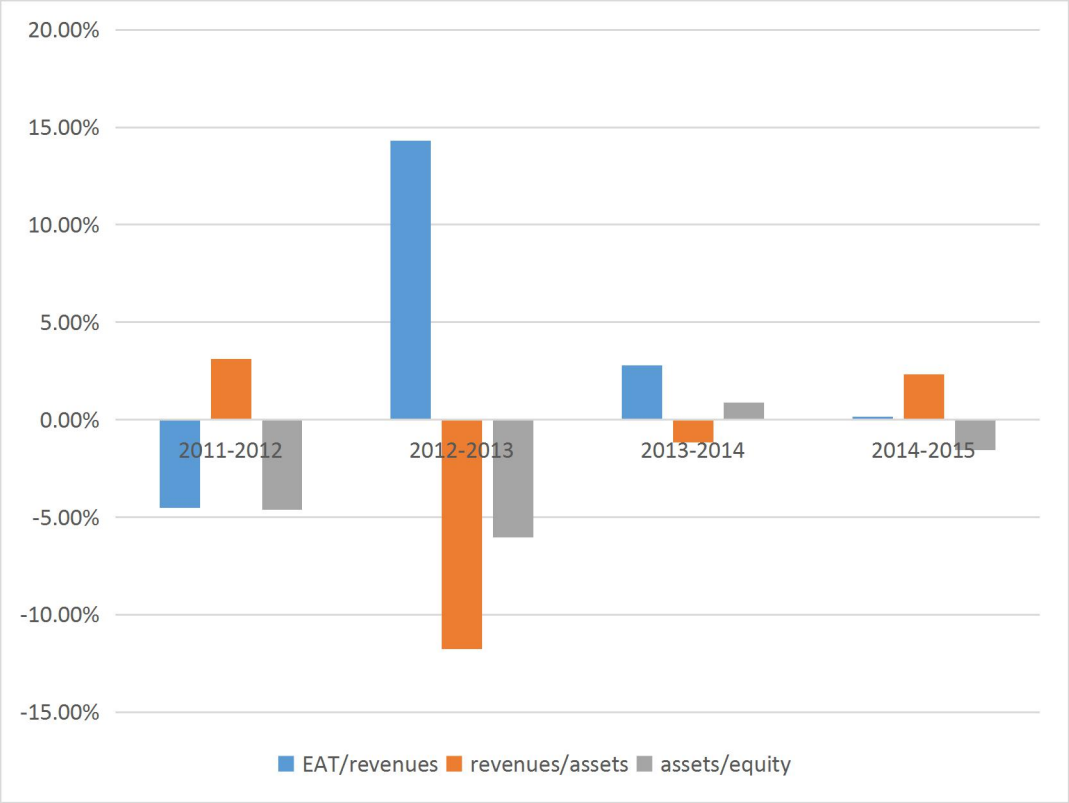
Table 4.21 Method of gradual changes (in percentage points)

	a_{2011}	a_{2012}	Δa	Δx_{a_i}	Order
a_1 = EAT/ revenue	0.049	0.041	-0.008	-0.045	2
a_2 = revenue/ assets	1.879	2.119	0.240	0.031	3
a_3 = assets/ equity	3.161	2.633	-0.527	-0.046	1
Sum	×	×	×	-0.060	×
	a_{2012}	a_{2013}	Δa	Δx_{a_i}	Order
a_1 = EAT/ revenue	0.041	0.067	0.026	0.143	1
a_2 = revenue/ assets	2.119	1.453	-0.666	-0.118	2
a_3 = assets/ equity	2.633	2.015	-0.618	-0.060	3
Sum	×	×	×	-0.035	×
	a_{2013}	a_{2014}	Δa	Δx_{a_i}	Order
a_1 = EAT/ revenue	0.067	0.077	0.010	0.028	1
a_2 = revenue/ assets	1.453	1.378	-0.075	-0.012	2
a_3 = assets/ equity	2.015	2.098	0.083	0.009	3
Sum	×	×	×	0.025	×
	a_{2014}	a_{2015}	Δa	Δx_{a_i}	Order
a_1 = EAT/ revenue	0.077	0.077	0.001	0.002	3
a_2 = revenue/ assets	1.378	1.523	0.145	0.023	1
a_3 = assets/ equity	2.098	1.967	-0.131	-0.015	2
Sum	×	×	×	0.010	×

Source: own elaboration based on company's financial statements

According to table 4.21, we can see the sum of influence was decreasing during 2011-2015. From 2011 to 2012, financial leverage had the most impact on ROE. The influence of financial leverage was negative, thus the sum of influence was negative too. From 2012 to 2013, the greatest impact was net profit margin, but the influences of total assets turnover and financial leverage were negative, so the sum of influence was negative. From 2013 to 2014, net profit margin had the greatest impact on ROE again. From 2014 to 2015, total assets turnover had the most impact on ROE. As a result, from 2011 to 2015, net profit margin had great impact on ROE, and Yili can control its ROE starting with net profit margin. Chart 4.15 reflects the influence of each component ratio visually.

Chart 4.15 The influence of component ratio



Source: own elaboration based on company's financial statements

5. Conclusion

In this bachelor thesis, we analyze Yili company during 2011-2015. In 2012, another student Kangyu, Wang analyzed Yili company during 2007-2011. Yili is the largest diary company in China and it ranks first in Asian diary industry. Common-size analysis and financial ratio analysis are used to analyze Yili. And all of the data come from balance sheet, income statement and cash flow statement in annex. In this chapter, we make conclusions of analysis, provide advice and compare Yili's performance with the period 2007-2011.

In the vertical common-size analysis of assets, we find that the three largest proportions in total assets were fixed assets, cash and cash equivalents, inventories, which is in line with the findings of Wang (2012), who analyzed the company in period 2007-2011. Although fixed assets accounted for a relatively large percentage in total assets, it can't be decreased. Because Yili was a large diary company and it owned a large number of cows, pastures and factories. Yili relies on fixed assets to produce products.

Inventory accounted for one of the largest proportion in these five years. In accordance with Wang (2012), we have found out that inventory accounted for one of the largest proportion. Yili produces dairy products. It's not good for it to keep too many commodity stocks. And inventories are hard to be converted into cash, it's better to reduce the proportion of inventories. As to cash and cash equivalents. It's better to reduce the proportion of cash and cash equivalents. Yili can invest more in projects or pay more dividends to shareholders. Because when cash and cash equivalents occupies too much, it affects the assets utilization.

According to the horizontal analysis of total equity and liabilities and solvency ratios, we find that the proportion of liabilities was decreasing and was almost equal to the proportion of equity in 2015. Wang (2012) found that the main source of financing in the period 2007-2011 was liability. After comparing the conclusions, we can find that Yili tried to decrease the high proportion of liabilities. But according to

interest coverage, Yili spent small amount of money on interest. It means that Yili can borrow more money.

In the financial ratio analysis, according to profitability ratios, we find that Yili's ability to generate profits was better and better, thus revenues and profit were greater and greater. According to liquidity ratios, we find that Yili made great progress in ability to meet its obligations. As to activity ratios, compared with the period 2007-2011, average inventory turnover was higher than previous period. It shows better control on inventories. As for PE ratio, dividend yield and pay-out ratio, we can find Yili was placed great expectations and it paid more and more dividends. It was great for shareholders and can attract more investors and made financing of capital easier.

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List of Abbreviations

ACP	Average collection period
ART	Accounts receivable turnover
EBIT	Earnings before interest and taxes
EBT	Earnings before taxes
EAT	Earnings after taxes
IT	Inventory turnover
NPM	Net profit margin
OPM	Operating profit margin
OP	Operating profit
ROA	Return on assets
ROE	Return on equity
TAT	Total assets turnover

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Student's name and surname

List of Annexes

Annex 1

Balance sheet of Yili company from 2011 to 2015 (in million RMB)

	2011	2012	2013	2014	2015
Current assets					
Cash and cash equivalents	3,921	2,004	8,173	14,273	13,084
Notes receivable	106	131	182	139	147
Accounts receivable	281	289	340	513	572
Advances to suppliers prepayments	835	648	330	390	615
Interests receivable	10	5		69	71
Other receivables	264	136	124	66	50
Inventories	3,310	2,995	3,683	5,008	4,663
Other current assets			3,635	542	584
Total current assets	8,727	6,207	16,467	21,001	19,786
Non-current assets					
Available for sale financial assets	14	17	348	822	985
Long-term receivables					3
Long-term investment on stocks	567	568	558	26	122
Fixed assets	7,027	8,900	10,404	13,121	14,559
Construction in process	1,591	1,511	1,484	939	776
construction materials	45	7	9	19	7
Disposal of fixed assets				4	
Productive biological assets	871	1,340	1,278	1,289	1,299
Intangible assets	676	832	913	930	956
Goodwill			11	11	11
Long-term prepaid expenses	43	65	89	186	216
Deferred tax asset	368	368	825	686	412
Other non-current assets			492	460	500
Total non-current assets	11,202	13,608	16,410	18,493	19,845
Total assets	19,930	19,815	32,877	39,494	39,631
Current liabilities					
Short-term borrowing	2,985	2,578	4,086	8,072	6,190
Notes payable	142		165	266	563
Accounts payable	4,379	4,361	5,192	5,281	6,079
Deposit received	3,052	2,599	3,347	2,163	2,036
Staff salaries	1,215	1,209	1,320	1,488	1,692
Tax payable	-24	-370	381	352	368

Interest payable	27	2	3	11	3
Dividends payable	9	12	15	40	40
Other payable	1,073	1,084	947	1,014	1,148
Non-current liabilities falling due within one year	8	3			
Other current liabilities			60	70	84
Total current liabilities	12,866	11,478	15,517	18,757	18,202
Non-current liabilities					
Long-term loans	7	5	0	704	0
Long-term payable					
Specific accounts payable	58	64	102	177	143
Deferred income				1,029	1,139
Deferred income tax liabilities	2	2	4	7	
Other non-current liabilities	691	742	942		
Total non-current liabilities	758	813	1,048	1,916	1,283
Total liabilities	13,624	12,290	16,565	20,673	19,485
Owner's equity					
Paid-up capital	1,599	1,599	2,043	3,064	6,065
Capital reserves	1,851	1,845	7,539	6,481	2,477
Other comprehensive income				23	197
Surplus reserves	532	683	914	1,143	1,455
Undistributed profit	2,043	3,209	5,641	7,922	9,791
Translation reserve	-1	-1	-12		
Total equity(parent company)	6,024	7,335	16,125	18,634	19,984
Minority equity	282	190	188	188	162
Total equity	6,305	7,525	16,313	18,822	20,146
Total liabilities and owner's equity	19,930	19,815	32,877	39,494	39,631

Annex 2

Income statement of Yili company (in million RMB)

	2011	2012	2013	2014	2015
I.Total operating revenue	37,451	41,991	47,779	54,436	60,360
Including:Operating revenue	37,451	41,991	47,779	53,959	59,863
Interest revenue				477	496
II.Total operating costs	35,959	40,402	45,251	50,154	55,652
Including:Operating costs	26,486	29,505	34,083	36,400	38,376
Business taxes and surcharges	233	249	234	185	251
Selling expenses	7,291	7,778	8,546	10,075	13,258
Administrative expenses	1,971	2,810	2,392	3,163	3,456
Financial expenses	-49	49	-33	155	297
Impairment losses on assets	28	11	30	176	14
Investment income(loss denoted by"-")	254	27	131	108	186
Including :Share of profit of associates and jointly controlled entities	-2	6	4	-2	6
III.Operating profits(Loss denoted by"-"）	1,746	1,616	2,659	4,390	4,894
Add:Non-operating income	421	502	440	463	712
Including:Gain on disposal of non-current assets				7	8
Less:Non-operating expenses	31	31	38	67	83
Including:Loss on disposal of non-current assets	23	8	23	34	27
IV.Total profit(Total loss denoted by"-")	2,136	2,087	3,060	4,786	5,524
Less:Income tax expenses	304	351	-141	619	869
V.Net profits(Net loss denoted by"-")	1,832	1,736	3,201	4,167	4,654
Net profits attributable to shareholders of the parent company	1,809	1,717	3,187	4,144	4,632
Profit and loss of minority interests	23	19	14	22	23
VI.Other comprehensive net income after tax	-4	2	7	3	174

Other comprehensive net income after tax attributable to owners of parent company				3	174
A.Items not to be reclassified into profit or loss in subsequent periods					
B.Items to be reclassified into profit or loss in subsequent periods				3	174
Gains or losses from changes in fair value of available for sale financial assets				20	160
Differences on translation of foreign currency financial statement				-17	15
VII.Total comprehensive income	1,829	1,738	3,208	4,169	4,829
Total comprehensive income attributable to shareholders of the parent company	1,806	1,719	3,194	4,147	4,806
Total comprehensive income attributable to minority interests	23	19	14	22	23
VIII.Earnings per share					
(1)Basic earnings per share	1.13	1.07	1.65	1.35	0.76
(2)Diluted earnings per share	1.06	1	1.65	1.35	0.76

Annex 3

Cash flow statement of Yili company (in million RMB)

	2011	2012	2013	2014	2015
I.Cash flow from operating activities:					
Cash received from sales of goods and rendering of services	44,505	48,225	56,065	61,042	68,922
Cash received from interests, handling charges and commissions				408	494
Tax rebates received	1	1	2		
Other cash received concerning operating activities	731	769	841	832	1,019
Subtotal of cash inflows from operating activities	45,237	48,995	56,907	62,283	70,436
Cash paid for purchases of commodities and receipt of services	36,128	39,710	44,353	49,532	50,843
Net cash increased in deposits in central bank and the same trade				1,806	-963
Cash paid to and for employees	2,783	3,624	3,939	4,979	6,337
Cash paid for taxes and surcharges	2,190	2,656	2,506	2,740	3,655
Cash paid for other operating activities	466	595	635	789	1,028
Subtotal of cash outflows from operating activities	41,566	46,586	51,433	59,846	60,899
Net cash flows from operating activities	3,670	2,409	5,475	2,436	9,536
II.Cash flows from investing activities					
Cash received from recovery of investments	436	4	122	43	190

Cash received from investment income	14	21	134	111	64
Net cash received from disposals of fixed assets,intangible assets and other long-term assets	27	20	59	15	26
Net cash received from disposals of subsidiaries and other operation units	26				45
Cash received relating to other investing activities			6,000	2,900	
Subtotal of cash inflows from investing activities	503	45	6,316	3,069	325
Cash paid for acquisition of fixed assets,intangible assets and other long-term assets	3,789	3,102	3,241	3,946	3,652
Cash paid for investments	190		432	121	159
Cash paid for acquiring subsidiaries and operation units			3		
Cash paid relating to other investing activities			8,900		
Subtotal of cash outflows from investing activities	3,978	3,102	12,576	4,067	3,812
Net cash flows from investing activities	-3,476	-3,057	-6,260	-999	-3,487
III.Cash flows from financing activities					
Cash received from absorbing investments	1		6,118		

Including:Cash contribution to subsidiaries from minority shareholders' investment	1				
Cash received from borrowing	3,970	5,581	5,312	9,561	10,821
Cash received relating to other financing activities		86	307		
Subtotal of cash inflows from financing activities	3,970	5,666	11,737	9,561	10,821
Cash paid for repayment of borrowings	3,775	5,992	3,816	4,871	13,406
Cash paid for distribution of dividends,profit or payment of interest expenses	88	530	606	1,807	2,659
Including:Dividend and profit paid to minority shareholders by subsidiaries	9	9	4	6	30
Cash paid relating to other financing activities	239	49	75		1,034
Subtotal of cash outflows from financing activities	4,102	6,571	4,496	6,678	17,100
Net cash flows from financing activities	-132	-905	7,241	2,882	-6,279
IV.Effects of foreign exchange rate changes on cash and cash equivalents	-1	0	-5	0	-14
V.Net increase in cash and cash equivalents	62	-1,554	6,451	4,320	-244

Add:Balance of cash and cash equivalents at the beginning of the period	3,182	3,243	1,690	8,140	12,461
VI.Balance of cash and cash equivalents at the end of the period	3,243	1,690	8,140	12,461	12,217

Annex 4

Vertical common-size analysis of assets (in million RMB)

	2011	2012	2013	2014	2015
Cash and cash equivalents	19.67%	10.11%	24.86%	36.14%	33.01%
Notes receivable	0.53%	0.66%	0.55%	0.35%	0.37%
Accounts receivable	1.41%	1.46%	1.03%	1.30%	1.44%
Advances to suppliers prepayments	4.19%	3.27%	1.00%	0.99%	1.55%
Interests receivable	0.05%	0.02%	0.00%	0.18%	0.18%
Other receivables	1.33%	0.68%	0.38%	0.17%	0.13%
Inventories	16.61%	15.11%	11.20%	12.68%	11.77%
Other current assets			11.06%	1.37%	1.47%
Total current assets	43.79%	31.33%	50.09%	53.17%	49.93%
Available for sale financial assets	0.07%	0.08%	1.06%	2.08%	2.49%
Long-term receivables					0.01%
Long-term investment on stocks	2.84%	2.87%	1.70%	0.07%	0.31%
Fixed assets	35.26%	44.92%	31.64%	33.22%	36.74%
Construction in process	7.98%	7.63%	4.51%	2.38%	1.96%
construction materials	0.22%	0.04%	0.03%	0.05%	0.02%
Disposal of fixed assets				0.01%	
Productive biological assets	4.37%	6.76%	3.89%	3.26%	3.28%
Intangible assets	3.39%	4.20%	2.78%	2.36%	2.41%
Goodwill			0.03%	0.03%	0.03%
Long-term prepaid expenses	0.22%	0.33%	0.27%	0.47%	0.55%
Deferred tax asset	1.85%	1.86%	2.51%	1.74%	1.04%
Other non-current assets			1.50%	1.17%	1.26%
Total non-current assets	56.21%	68.67%	49.91%	46.83%	50.07%
Total assets	100.00%	100.00%	100.00%	100.00%	100.00%